THE EFFECTS TRANSPORTATION PLANNING, INFRASTRUCTURE, AND OUTCOMES ON THE KENAI PENINSULA

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A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of

Master of Arts

in

Rural Development

University of Alaska Fairbanks

May 2020

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Abstract

In this research, I explored qualitative and quantitative authentic data that documented evidence of transportation and community expressions to explain the relationships identified and to help understand common traits that present a connection with the human aspects of transportation. The primary intent of the research was to determine if comments provided by rural and urban communities about transportation conditions shared common traits such as safety, property value, and personal interests. This study explored the long-term value of transportation infrastructure, where the value was determined by the people who used the infrastructure from their expressions presented in public meetings. Rural and urban communities have different preferences, yet the findings of this study suggested that identifiable attributes are shared. The data identified a set of common attributes that are associated with measurable qualitative data, including safety, development, personal interests, basic needs, property issues, economic changes, and requests for information as coded values. These values come from the roads driven on, vehicles driving on them, and the people who use them.

The study focused on one development entity, the Kenai Peninsula Borough, which did document public input and decisions made as an advisory opinion about transportation recommendations in meeting minutes. A review of 15 years of records from the Kenai Peninsula Borough demonstrated that the relationship between transportation infrastructure and community 1) has common identifiable attributes, 2) is measurable, and 3) provides information about transportation value as well as the rates of change that a community experiences. The data analysis demonstrated that the comments were 45% were urban, and 55% rural, suggesting that the relationship is balanced between the populations on the Kenai Peninsula. The analysis utilized an emergent method that found common traits as well as temporal and spatial variations

between common themes expressed by community members, the amounts of transportation work performed, and measurable comparisons of the data. The results demonstrated that there are common measurable traits that exist in transportation information that can be evaluated using mixed methods. There are also limiting factors associated with the research.

Table of Contents

Page

List of Figures

Page

List of Tables

Page

List of Appendices

Glossary of Terms

	Term	Definition
A		
	Aggregation:	Aggregation is an assembly of similar data merged into a single data reference about a subject, term or topic.
	Attribute:	An attribute is the representation of common data, information, or subjects expressed by people.
	Attrition:	A measurable reduction or loss.
	Authenticity:	A verification process that verifies the availability of research material for review in terms of being common and available and can be seen every day.
B		
	Borough:	A borough is a local government that has a defined boundary within the state.
C		
	Census Designated Place:	An area defined by the United States Census Bureau based on populations and geographic areas.
	Clusters:	Identification of a data assembly used to describe a common theme or measurement.
	Commonalities:	A grouping of similar codes, themes, or attributes.
	Completeness:	An evaluation to determine if the data generated includes all data, mixed data, or represents missing data.
	Consortium:	A group of entities that share a common goal and have agreements to work cooperatively.
D		
	Data Consolidation:	The transformation of data into graphic representations that identify data relationships.
	Data Transformation:	A process used to identify common themes that expressed similar issues or common attributes for data analysis.

	Disadvantaged:	A person or group of people who experience unfavorable challenges.
E		
	Emergent:	A process that assembles information to create data based only on the information provided.
	Exploratory Sequential Design:	A linear exploratory sequential process intended to determine how including quantitative data with quantitative values provides research results.
G		
	Grassroots:	An event or organization assembled with ordinary individuals.
H		
	Hub:	Larger communities in Alaska that express urban qualities by having larger populations, services variety, infrastructure, and commerce
I		
	Impact:	A measure of change represented as positive or negative.
	Infrastructure:	The assembly of all transportation pathways used by the general public.
M		
	Maintenance:	The efforts made to keep transportation pathways clear and useable.
	Matrix:	An assembly of data represented in rows and columns for evaluation.
	Mixed Method:	A research method that is used to evaluate qualitative and quantitative data.
P		
	Per capita:	The measurement of individual people in a defined area.
Q		
	Quantitative:	A measurement of data that relies on the measure of quantity or numerical value.

	Qualitative:	A measurement of data that represent subjective information based on the quality of the material evaluated.
R		
	Representative Data:	A subset of data that is intended to be similar to the entire set of data.
	Retention:	Retention is a measurement that expresses stability.
	Route:	A route is a transportation path that may represent dirt, gravel, or paved roads.
	Rural:	Represented as a small community based on populations and characteristic lifestyle.
S		
	Spatial:	Spatial information is measurable data that exists in an area or space.
	Static:	A fixed or stationary measurement.
	Subsistence:	A federal process that is defined in the Alaska National Interest Land Conservation Act, which relied on population thresholds to determine whether a community is urban or rural.
T		
	Temporal:	Temporal information is measurable data that is created and exists over a period of time.
	Trait:	An identified type of data that indicate similarities in data types.
	Transportation:	A general reference to a path that may represent dirt, gravel, paved roads, trails, and walkways.
	Trend:	Multiple events represented by similar data
U		
	Urban:	Represented as a large community based on populations, services, commerce, and characteristic lifestyle.

Chapter 1

Introduction

1.1 Purpose Statement

My research focuses on public perceptions of transportation project planning, roadwork, development, and evaluations presented by the public. My intent is to identify relationships and explore the attributes between transportation developments and communities within the Kenai Peninsula in terms that provide a value of impact and benefit. This research considers attributes as common themes that appear repeatedly and share parallel information that defines common issues as groups. The purpose included identifying and evaluating relationships between transportation infrastructure and communities that are linked by it. Vehicle transportation infrastructure interacts with community functions, the size of the community, and how the community interaction with neighboring areas. I found little existing research about this subject specifically related to urban and rural communities in Alaska. I was particularly interested in the relationship between the people who make use of transportation infrastructure and those who make transportation decisions. Tillotson (2013), for example, suggested that such links do exist. He indicated that most transportation developments do not represent the qualitative aspects of transportation and also stated that there is an unbalance between rural and urban communities.

The research consisted of evaluating transportation issues on the Kenai Peninsula and determining if there were identifiable attributes that represented interactions between community views and transportation development. The Kenai Peninsula is located in south-central Alaska and is geographically contained by the Cook Inlet and the Gulf of Alaska. It is accessible through a single roadway. The Kenai Peninsula has both rural and urban areas that represent large and small population clusters with a population of approximately 59,000 people (KPB Planning

Department, 2017). The majority of the population is connected to the road system and represent user groups associated with transportation infrastructure. The Kenai Peninsula also has a variety of roadways that primarily consist of two-lane roads, which range from dirt to asphalt. This research evaluates the most populated area of the Kenai Peninsula that is located within the 70-mile spatial area. The communities located within the study area included Clam Gulch, Ninilchik, Happy Valley, Anchor Point, Diamond Ridge, Homer, Kachemak, Fritz Creek, Kasilof, Kalifronsky, Soldotna, Funny River, Sterling, Ridgeway, Kenai, Salamatof, Nikiski, Point Possession, and Nikolaevsk. There are three federally recognized Tribes associated with the study area and include the Kenaitze, Ninilchik, and Seldovia Tribes.

My research intends to capture what the community desires and create a quantitative framework that can be measured and evaluated to assist transportation professionals in identifying and understanding community relationships associated with transportation in Alaska. The assembly of data in this study represents community perceptions expressed by people who voiced their opinion in documented transportation processes. I approached this with a mixed methods design to capture objective data and perceptions that would identify components and allow for an evaluation of the relationships between them.

Literature reviews also raised interest in how the qualitative aspects of the interaction between communities and specialized services are commonly evaluated because transportation is a crucial component associated with accessing these services. In routine evaluations, the human aspects of needs and performance are delivered by advertising a service or program, raising awareness, and communicating information about them. The technique of representing issues using advertisement was not found to be commonly used in transportation efforts.

Figure 1. The Urban Example City of Kenai. Kenaitze Health Center in Kenai, Alaska.

In the following example about specialized groups, the success of health care may depend on transportation. An example would include the representation of an issue such as health care statistics or rehabilitation-service that are very common and focus on particular groups of people (Gottstein, 2005). It seems that the measure of success of the specialized services is based on participation rather than how services would change by addressing transportation mechanisms. It appears that the technique is commonly used for specific niches, but has not captured the values associated with the complete assembly of these needs and should include how people interact with these niches and how they travel to get there. The entire assembly about this type of evaluation is described by the Alaska Department of Public Health and identifies the ability to get to health care as a common problem in addressing health care needs (Alaska Division of Public Health, 2016). The typical presentation of needs leaves questions about how people get from place to place and whether transportation infrastructure is adequate to meet those needs. Traveling to receive services is taken for granted and seems to be an expected service that may

be adequate for some users and not appropriate for specialized users. These issues may be indications of implicit bias seen in niche evaluations.

The development of transportation infrastructure has drawn on the ideas of success and failure as goals rather than measurements that include how well transportation infrastructure addresses the needs of a community and how the development contributes positively or negatively. Assessing the process of moving people, providing access, and total transportation availability may not have been providing a complete picture when measuring how these things affect the public. Without measuring the publics' perception, policies, and projects, the planning processes do not present the intention of the work and may have had unintentional effects. These effects may have been due to outlying development issues such as industry, and private development quietly driving the transportation process.

The idea of what success or positive change can be is part of what has been unclear when evaluating transportation outcomes. As an example, community retention and attrition can be compared to growth rates to evaluate transportation infrastructure development efforts and provide measurable results. Population change also provides measurable value; however, to evaluate the measurement qualitatively, the analysis needs to capture perceptions about the changes to identify clear correlations with supporting information. The needs, desires, and wishes of a community provide qualitative data that supports the meaning of success. The application of this research is an effort to establish common ground between communities and transportation systems in terms of perceptions, infrastructure work, and community change.

The grouping of both qualitative and quantitative information may or may not exist within a data set and is dependent on the context of the data found. For example, if I identify four roads in evaluation, I can measure the roads and establish values. The more elusive part of the

evaluation is how do people feel about the road. Do they feel safe driving it or walking beside it? Perhaps pedestrians who walk feel safe, and drivers may not. In some instances, qualitative and quantitative data is identified by the theme through an emergent process that defines itself as information is found, creating a way to associate qualitative information with quantitative data. The identification and evaluation of data have the potential to develop into common themes that identify relationships that may not otherwise be apparent in quantitative assessment (Cresswell, 2013).

Figure 2. The Rural Example of Kenai Alaska.

The Kenai Peninsula Borough consists of many rural areas associated with larger communities that exhibit urban characteristics. Demographic information identifies the most recent population estimate as 58,533 people living within the Kenai Peninsula Borough with a population density of 3.4 people per square mile (U.S. Census Bureau, n.d.e.). The study area encompasses 70% of the overall borough area. According to the U.S. Census, people between the

age of 18 and 65 years of age constitute 40% of the population. The racial demographics of the region consists of 83% Caucasian origins, followed by 6% mixed race individuals, followed by smaller percentages of other identified races. The Alaska Native tribes located on the Kenai Peninsula include the Kenaitze Indian Tribe, Ninilchik Village Tribe, and Seldovia Village Tribe. According to the U.S. Census, 90 % of individuals have a computer in their home and suggests that access to digital information is reasonably available. The population information indicates that nearly 25% of individuals over the age of 25 have education levels of a bachelor's degree or higher. This U.S. Census data is also identified with an average annual income of $66,684, and people experience an average commute of 20 minutes to a workplace.

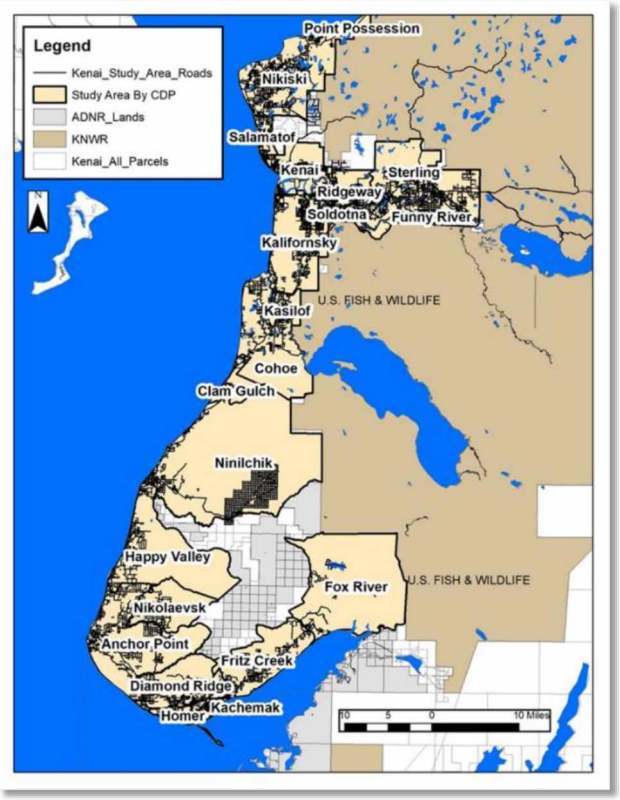


Figure 3. Kenai Peninsula Study Map Area.

Given my previous work experience, I had identified a relationship between transportation and community sustainability. However, I found very little existing research focusing on the perceived value of transportation to Alaska communities. There is a lack of information that would help identify and describe the expressions of a community in measurable terms that could be compared to neighboring communities or as quantitative data. The ways that a community values infrastructure may be different from the cost or the purpose of the design of that infrastructure. Infrastructure may not always support industry or provide access to a destination. Infrastructure may be important to community members in other was. For example, it may hold an aesthetic value that the community identifies with, or a community may have slow speed limits because the local people may enjoy walking along the local roads. It may not be a good roadway for hauling freight, but the community chooses to keep the roads the way they are because they like them. In any case, communities and developed infrastructure both present measurable attributes that express qualitative information associated with quantitative data that may communicate the impact and benefit to a community.

Decision makers that have relied simply on populations, geographic location, or votes may or may not have made their transportation project development decisions based on all of the supporting information. Communities in Alaska are demographically diverse and occupy large areas. These areas are inhabited by the long term resident populations of Alaska and include regionally diverse cultures, including Alaska Natives. Many of these regions and Alaska Native communities have unique transportation pathways and participate in federal transportation programs. There are also regional differences in how transportation development is perceived. In many cases, I have been told by members of the Alaska Native community that the preservation of natural resources and subsistence harvests are considered more valuable than the development

of infrastructure, or an industry that could create economic drivers in various regions of Alaska. This idea does not mean that there is no need for infrastructure or development; instead, there is a desire to have a voice in the decision making processes. Their comments support why development processes should include and reflect community values. In the situations where a local population approves of development and transportation infrastructures, the approval may be based on information such as cost or need, but the qualitative value is not the same for everyone.

In my initial review of the existing research, I identified gaps related to qualitative information associated with transportation development, suggesting that representation may be an issue. For example, Gottstein (2005) described the unique attributes of Alaska communities by focusing on mental health needs. The review included transportation issues by describing how people traveled to receive help. While Gottstein described information about different types of communities in Alaska, he presented a focus on a specific sample only consisting of people receiving mental health services and did not extend the evaluation beyond that group. Gottstein's work provides an example of people commuting to receive services to meet their individual needs. Gottstein argued favorably for the specialized efforts of nonprofit organizations, consortia, and coordinated oversight to describe the success of the mental health effort but did not expand the work to include how transportation changes could provide additional benefits. While consortiums serve a purpose, the author provided little information about how needs were met in terms of access to services to connect people with consortia or to the towns where these consortia based services are available. Gottstein also provided little detail regarding the needs and wishes of the people represented and left unanswered questions about the desires of the group being evaluated to provide the qualitative component. For example, would the expansion

of treatment centers be a preferable option to this population rather than traveling to neighboring areas to receive help?

The National Association of Development Organizations Research Foundation (2011) provided a report about appropriate transportation project prioritization and planning efforts in rural areas. The Association's information was based on planning that considered transportation efforts provided through state, county, and regional initiatives. The Association mentioned the use of qualitative measures to identify needs but never identified what those needs were, how they were identified as priorities, where the qualitative data came from, or what weight the qualitative values had in the planning processes. The Association's approach has left a different gap in the literature by identifying values yet not expressing what those values are or how they are obtained. Research may represent individual community views, but there is no way to tell. These are typical examples of existing transportation research associated with infrastructure development, which seems to have represented special groups or presented general concepts leaving questions about the identification of needs or how to measure, evaluate, and address identified needs. The focus of my research is to identify public perceptions of transportation and transportation projects, as evident in public commentary using a mixed methods process to determine where the data have common themes.

1.2 Statement of Question

I ask the question: how has community input impacted transportation infrastructure and development. The development of transportation infrastructure has a direct effect on all aspects of a given community in Alaska. The primary role of transportation infrastructure has been developed to further natural resource development, the economy, and private enterprise. My study focused specifically on the Kenai Peninsula. At the time of this study, the local borough

used the Road Service Area (RSA) board that performed planning activities and received input from the public regarding transportation decisions. The board serves as a localized mechanism to identify public commentary related to transportation development within a given area. According to the Federal Highway Administration (FHWA), in its document *Transportation Planning Process Key Issues*, they describe public input as an effort that is aligned within the mandates of guiding regulations (2015). The FHWA mentioned the process of public involvement. However, there are no criteria, procedures, goals, or recommendations to support how transportation consultation and evaluation thresholds were met other than that public participation was performed. The criterion does not support the common idea that regulations state how comments are received or about how the requirements for the public process is done because the process is not defined. According to Transportation Planning Process Key Issues, consultation is considered successful based on the delivery of notifications and the effectiveness of the notification process. This example suggests that the guidance leaves the evaluation of public ideas as a relative process rather than a clear need for research thresholds to determine whether the public processes are meaningful and include public input as a development issue. These examples inspired me to ask the question: How has community input impacted transportation infrastructure development during the last 15 years in the study area?

My research also contributes to the clarification of the meaning of transportation infrastructure in terms of what is important to people and what is communicated in a public process. The evaluation of community-based planning efforts within the Kenai Peninsula Borough demonstrates unique individual priorities is comparable to the development of infrastructure and that these priorities can be measured in terms of community needs, expressions, and the initiation of transportation programs established to meet these needs. I

hypothesized that these community-based planning efforts consisted of attributes such as community priorities, sustainability, development frameworks, population, planning, and the technical capacity of the community to address transportation development. To test this hypothesis, I identified the qualitative aspects of the community's needs, as described in the methodology used in Chapter 5. Some of these data were conceptual, and others were numerical. I also derived some data from existing literature. The process of identifying attributes and evaluating the relationships provided information to determine whether the measured characteristics had an objective existence or were only perceived.

Chapter 2

Limitations

There were several limitations to this research that could affect the validity of the findings. The most important was the range of documentation. The idea that most roadwork would include a record of a public process and that this process would be a typical documented process expectation was not correct. The lack of interaction between the organizations that performed transportation work limited the extent of completeness and the conclusions that can be drawn from the source data. The differences and absence of documentation between different planning processes from public transportation authorities did not support useful comparisons that would answer the questions for this mixed methods study.

The evaluation of the data from the Kenai Peninsula Borough demonstrated a noticeable increase in public participation after 2014. This change encouraged me to consider evaluating two temporal frameworks based on the shift, creating a 2003-2014 and 2015-2018 data set. The data indicated that the classification of attributes remained the same, but the ranking of the attribute category changed order. For example, during 2003-2014, safety was the first priority in terms of the number of comments that addressed safety issues. During 2015-2018, safety moved down to the third most prevalent comment. The shift in attribute ranking suggests that there may have been a more significant shift in the planning process. In the event other documentation had been available to verify the finding or a documentation process existed that relied on the interaction between transportation authorities, it would have provided a verification that would increase the accuracy of data reviewed.

2.1 Public Participation

Other limitations included low public participation in the process. In the documents reviewed, there is some uncertainty about the degree of involvement. Total participants in the process made up 0.3% of the population of the Census Designated Place areas that provide internal data sets in census areas within the identified study area. The participants included individuals who attended public meetings and expressed their views about transportation. Information about the public meetings is available to the public. The RSA meetings occur eleven months a year, in the evenings a 7:00 pm, at the borough building in Soldotna. A meeting does not take place during the month of December. The meeting schedule is posted on the internet, and phone information about the meeting is available. The process is a formal public meeting, and there are no services provided to accommodate participants. Had this research been intended to evaluate public participation, it may have explored the issues associated with low participation. The number of factors affecting participation appears to be significant and most likely is associated with additional limiting circumstances that reduce participation.

Any results in infrastructure development may or may not support the information provided in the public participation process. The information reviewed suggests that all potential participants had common relationships with the public process and an equal opportunity to participate. The summarization of comments in the documents themselves was another inherent limitation. Although summarizing comments is a standard method, there may have been instances where the summary failed to capture the meaning or intent of the original statement.

The research is also limited in the interactions between all of the contributors to the transportation process. State, federal, private, and tribal contributions are part of the measurable values. Still, the lack of archived information made this evaluation difficult where the public comment process, the absence of archived state public comments, and private development

exclude public participation evaluation. Considering the data that was available in environmental documents, there may not be a way to compare the data between these different contributing groups in terms of planning, community response, and the weight of input. The archived information issue is also related to the temporal relationship because of the different work performed by the various contributing groups spanning years of time. Ideally, each contributor would be able to provide archived records of public participation as well as the identified workplaces in a common framework for evaluation.

2.2 Unrepresented Attributes

Two forecasted attributes were not captured in the borough-wide public processes. The first attribute is private development. Private development was noted when addressing the required permitting or design standards used for these types of projects. This kind of development did not provoke public process or comments because they are private endeavors. New development such as subdivisions or access to private property also has an associated relationship with transportation systems. Still, few references were made to private development in the research because the Kenai Peninsula Borough, as a local government, works with transportation issues that the Borough owns or has agreed to maintain. An example of exclusion is as follows:

> Malone states that the Friendshuh's would like to speak at the next meeting regarding their exception request to RSA road standards for maintenance in their subdivision. He has explained to them that time is not of the essence because it would not be approved until the October board meeting and that it is not an action item for the board at this meeting. (Kenai Peninsula Borough Road Service Area, 2017, p. 3)

The second unrepresented attribute is the relationship between the U.S. Government, The State of Alaska, and the Alaska Natives as Indigenous people. The interests and rights of Alaska Natives in public transportation are in the early stages of development. Alaska's relatively recent admission to statehood, the latest federal determination about land rights (*Akiachak Native Cmty. v. United States Dep't of Interior, 2016*), and the Alaska Native Claims Settlement Act (1971) demonstrates that these issues are still not defined. There is little doubt that the powers and roles of Tribes will continue to develop to address rights and jurisdiction in the future as settlement issues continue to be litigated, lobbied, and enter into inter-government agreements. The transportation relationships exist in the tribal environment, but no tribal information was documented in the transportation efforts of the Kenai Peninsula Borough's public transportation planning process. Because tribal decisions are treated as private efforts, the tribal effort was not included in the Borough process. The data indicates that some attributes are simply not accounted for in the data because they are not Borough decisions. Other limits may include no interaction between processes or because local, tribal, and federal regulatory procedures do not require the same interaction or documentation to develop long-term public participation efforts in these programs.

Most tribes in Alaska have been federally recognized and have a unique relationship with the federal government. Individual tribes have their own defined leadership structures that represent the local Alaska Native community. Tribes establish priorities and engage issues differently from other parts of Alaska. Having worked for a Tribal government entity over fifteen years, I believe that the attributes associated with transportation topics are fundamentally the same as other contributions to the transportation process and are based on planning, perceptions, and decisions (Tribal Transportation Program, 2016).

My research is related to decisions made in terms of identified attributes within a defined area to determine if there are measurable commonalities. Standard common groups consist of rural and urban. The research noted that commenters said where they were from during the planning process. The individual expressions can be related to different rural and urban concepts about the same topic. Research suggests that a community of people have their own ideas and their own answers that represent the right way to do something as described by Jojola(n.d.). The process is similar to the descriptions expressed by Patton (2015) and Matunga (2006), who described how a process of social equality must include qualitative perceptions and ideas of community members in order to reach an understanding of rural and urban societies in the Alaska environment. Communicated ideas are certainly the expression of social equality and evaluations of empowerment. In this case, individuals who use transportation infrastructure have equal standing in terms of road use and ancillary items such as road signs and surface types but are limited in exploring how those ideas are different.

Other expressions such as Indigenous concepts include a tribal government, as an additional layer of government associated with Alaska Native people. The Tribal governments' planning processes have not always been aligned with the general public, federal, state, or borough planning processes because tribal government decisions are based on an alignment of tribal knowledge and tribal priorities (Matunga, 2006). The tribal planning process has been described as a critical process based on the Indigenous context used to make decisions (Porter, 2017), but the problem here is that it is not tied together with other government infrastructure efforts, it is difficult to measure. Assumptions underlying the critical process include how Indigenous people determine their own interest in places and support their own cultural ideas that were not noted in the review process. Porter (2017) described this placement of Indigenous

planning as "spatialising their indigeneity." Future collaboration with tribal organizations would be valuable to identify common goals and development efforts.

2.3 Temporal Frameworks

The time associated with transportation infrastructure development is also a limiting factor of the research. Transportation development is a slow process that requires planning, seasonal construction windows, and funding to perform road work. Data about participation in a public planning process and the response to the participation suggests that there is either a five or 10-year cycle. While it was not my intent to evaluate these types of responses, data results suggest that further study would help define this relationship. The data evaluated over the fifteen years noted that there is also an individual temporal relationship related to public expression in terms of how much time it takes to see a response or a change. The data results demonstrate an increase in participation, followed by a response in road work, but data is unclear about how this process evolves. Data results also indicate that there are other events building in the data trend. If there were a longer term of data available for evaluation, we could determine how the data would assemble over time and evaluate the responses. Comments that supported the evaluation of time frames included references such as:

> Vi Nordgren, 16344 Easy Street, Ninilchik, AK 99639 (7:35)
>
> Mrs. Nordgren has been a member, employee, and served on the Ninilchik Senior Center board over the last eight years. Aspen Avenue is a well-traveled road. There are over 275 members that eat meals and participate in activities at the senior center. Having social interaction is a necessity for seniors. The road is heavily traveled between employees, members, and residents. Emergency Services have problems traveling with the amount of

potholes created by mass traffic. (Kenai Peninsula Borough Road Service Area Board, 2015, p. 6)

The eight-year time frame demonstrates several temporal relationships, including the time observed, the life span of the road, road use, and that no significant upgrade had been performed during this observation period.

Chapter 3

Literature Review

The literature associated with rural transportation and its effects on communities provided a variety of insights about the relationships between transportation and communities. Hamby (2012) described transportation information in Alaska as consisting primarily of planning documents, community comments, and transportation development examples that characterize the success and relevance of transportation changes based on the assessment of needs. Hamby further suggested that the evaluation of positive progress or failure is usually decided outside of the community itself. Most existing literature describes how planning efforts are directed to capture public input. Still, there were few records documenting the comments or describing how the information was obtained or evaluated in different transportation planning processes. Federal notice and public process requirements are set out in the Code of Federal Regulations (CFR). The Administrative Committee of the Federal Register determined that both comments and details were required to be summarized in the CFR (McKinney, 2018), which resulted in aggregated comments. This aggregation process takes comments and consolidates similar comments into a single question about proposed transportation projects or rules. If this process is not performed carefully, it can diminish the intent of comments.

The collective knowledge expressed by people in different communities reveals how well they believe they have been heard in terms of voicing their opinions and seeing those expressions reflected in change. The transportation planning and development process on the Kenai Peninsula included the perspectives of community members. However, according to one community member at a public meeting, she felt that the community's voices are not heard and had been categorized based on influence from private types of development. This person's

perspective constitutes a qualitative view about transportation planning and development. Such examples have been challenging to find. For example, tribal entities that have worked with the federal government have commonly been involved in transportation planning processes governed by the current transportation act (Tribal Transportation Program, 2016). Recently the tribal president of Craig, Alaska, wrote that "comments submitted by Kawerak and other tribes were summarily ignored and opposed without discussion" (Cook, 2016, p. 1). The Ninilchik Village Tribe, a Tribe on the Kenai Peninsula, also endorsed this letter (Encelewski, 2017).

Cook Inlet Keeper, a Homer-based environmental organization, sponsored a public meeting to review the Kenai Peninsula Borough's comprehensive planning updates and gather comments about planning topics. The discussion included transportation plans that would be submitted as a grassroots effort to address objections to existing planning. A significant part of the discussion was about members of the general public who had provided comments on previous projects based on their own desired outcomes and their experiences but without success. During this meeting, members of the public commented that communities had prepared and submitted signed petitions to change transportation projects, but those petitions did not have the effect of making change. They expressed that these experiences left the petitioners feeling like they had no voice in the development that it is happening in their own communities (Cook Inlet Keeper, 2018b). The meeting comments were compiled into a written statement asking the Kenai Peninsula Borough to include processes for "empowering partners" when projects demonstrate support for alternatives (Cook Inlet Keeper, 2018a).

The grassroots group felt that their input was not being heard or considered as part of the public comment decision making process. Other assessments also support this view. The local borough published planning documents and stated that they performed a telephone survey to

determine residents' level of satisfaction with transportation issues. According to the Kenai Peninsula Borough Planning Department (2017), the negative responses were significant enough that the evaluation of "life on the Kenai" received "a grade of D or F" (p. 146). These examples demonstrate a common theme where organizations and individuals feel that they are not being heard. Many people feel that the public process has been deficient:

> Jack Hamill, PO Box 2125 Soldotna, AK 99669
>
> He received a letter for the KPB Planning Department with an attached preliminary plat map indicating where Iditarod Street and Whitlock Street were to be extended through to W. Poppy Lane. He did not attend the Planning meeting to voice his opinion because he agreed with the preliminary plat. After the subdivision was developed and the road was not extended, he approached the KPB Planning Department to demand the roads be built according to plat. The Planning Department responded they do not have authority to make the developers build the roads that are platted. He does not know what the purposes are for having a preliminary plat available for comment then. Clint Hall told him that the Iditarod Street extension was going to be built. He believes Clint Hall snookered them for not building the extension. (Kenai Peninsula Borough Road Service Area Board, 2006, p. 2)

Literature that describes the state of knowledge about transportation information also presents different statements. It would seem that processes driven by public input would have a strong framework of documentation to support or denounce changes in infrastructure. However, when public information does not have historical documentation to measure public opinion and perception of how needs are addressed, or to determine saturation in public concerns, it leaves gaps in the evaluation process that can contribute to information gaps in this field. It also

suggests that the submission of comments on projects can come from the point of frustration where people do not feel that their voices are heard as indicated in the public meeting for the Kenai Peninsula Borough Planning effort performed by Cook Inlet Keeper (Cook Inlet Keeper, 2018b)

The Borough Planning Department (KPB Planning Department, 2017)) described the organization and procedures for the public process and that it intended to collect comments that will contribute to decision-making. The borough did this by developing an advisory group known as the Road Service Area (RSA) board to provide a mechanism to review transportation processes. The RSA is comprised of a seven-member board that is made up of individual representatives from four assigned road areas defined in borough ordinances, and three who represent an "at large" areas that are outside of the four designated areas (Kenai Peninsula Borough, 2000). The members of the board are appointed by the mayor and confirmed by the assembly according to the current borough appointment ordinances. The board works in an advisory capacity to address transportation issues within the borough and is governed by borough ordinances. The board's functions include reviewing work areas, receiving public input, and making board recommendations to certify roads for maintenance. Meetings occur on a monthly basis with the exception of not having a December meeting. The Kenai Peninsula Borough meeting process is an excellent example of a local government conducting regular business with a specific process to receive public comments.

Comments submitted by the public to the State of Alaska about transportation decisions have not been archived (S. J. Bushong, personal communication, February 5, 2018). The practice appears to be true statewide. Comments are obtained during the public process, and after the process is complete, they are not retained. This finding reduces the value of public input. It does

not provide a record of public participation or create historical information to find what public comments were, or how they were submitted, regarding projects sponsored by the State that uses this public process technique. Public comments should be preserved and archived. It is a valuable document, and even a record of the documentation would support the value of this effort to obtain and evaluate public thoughts about transportation development.

The Kenai Peninsula Borough RSA Board represents four designated road areas and three at large areas to participate in transportation planning and advisement to the Kenai Peninsula Borough. The RSA established a written record of transportation meetings dating back to 2003 (Kenai Peninsula Borough, n.d.). These records document meetings regarding road work, planning, and other identified issues where members of the public to comment. The documentation exists in the form of written minutes and attempts to capture the intent of what was being addressed at the public meeting. While they do not produce and maintain formal transcripts, the minutes document the interaction in summarized form between the RSA and the public regarding planning and development.

Larger projects that represent corridors through multiple areas or the use of federal appropriations presents inconsistencies in the document of public comment. The public process is often performed to meet regulatory requirements to gather input because of the use of federal tax dollars utilized in projects sponsored by organizations like the FHWA projects sponsored under the Motor Vehicle and Highway Safety Improvement Act (2012.) Perceptions about projects that are in the process queue for construction are stored on the Alaska Department of Transportation & Public Facilities website (Alaska Department of Transportation & Public Facilities, 2018). Public comments on these projects are found listed as Frequently Asked Questions (FAQs) or in Environmental Assessments that are composed when required. In my

review of the current information posted on the state website, there were no documents associated with the study area. I reviewed posted information from other areas, found that the postings contained few statements, and even less information about the origin of the comments, including the person who submitted it or where they live. These details reveal information about rural or urban issues. The information lacked detail and could be comments about any project. Other posted comments also do not provide submission information, and they appeared to be generic or generalized questions that are typically posted about a project.

Processes driven by public input might be expected to have a strong framework of documentation to support or criticize changes in infrastructure. Because public information has not included significant historical documentation, it is difficult to measure how needs have been addressed, or perceived to be addressed without historical context. The absence of documentation limits that state of knowledge to the recall of individuals because it is not written. The evidence from the public meeting effort organized by Cook Inlet Keeper (2018b) suggests that poorly documenting comments about projects can create more frustration when people feel that their voices are not heard.

3.1 Rural Versus Urban

The presentation of transportation project decisions also suggests that the value of public input form communities in Alaska has been different from that of other states based on rural and urban designations. The needs of urban and rural infrastructure are diverse and provide different services and modes of transportation. A rural setting in Alaska can range from a population of fewer than 100 people to the outlying areas of larger hub communities with populations of 5,000 or more. Keeney (2015) provided his views and defined what a rural community is using the usual population size and included other associated factors, such as economic drivers associated

with the community, to describe different types of rural communities. For example, a community that is small and engaged in agriculture would be considered a farming community and classified as rural.

Ideas about Alaska have not aligned well with typical determinations of rural or urban based on numerical distinctions or community designations introduced by Keeney (2015). The numerical designation of community size is evident in examples from the U.S. Census Bureau that described multiple designations of *rural* directly based on population sizes. Several designations have defined populations that exceed 50,000 people as rural (Cromartie & Bucholtz, n.d.). The Office of Rural Health (2016) used census data and expanded the designation of *rural* to include specific rural counties that included tracts in Anchorage and Fairbanks as having urban attributes, while larger populated areas such as the Matanuska Valley, Susitna, and the rest of Alaska also qualified as rural communities. The U.S. Fish and Wildlife Service considered rural is the actual dictionary definition of *rural*, which resembled the description presented by Keeney (2015) and included determinations about the characteristics of land use and living patterns described by Wolfe (2013) in Alaska based population evaluations.

An example of the idea of transportation needs in the rural environment in Alaska includes the writing of Yupiktak Bista (1974). He wrote and published a book that revealed the nature of the rural environment where he documented experiences and statements collected within Alaska's communities. The majority of the work focused on changes related to culture and subsistence effort associated with early statehood development. The author also included clear statements about the rural need for roadway transportation to support communities. Efforts like Bista's have provided information about how communities see themselves and identify as rural entities, and expressed needs. Bista also detailed how members of rural communities in

Alaska expressed the needs of their communities at public meetings. Even though the request for assistance may not have been delivered at the right type of meeting or with the proper agency, it supports a long-standing idea that concerns were expressed and did not have an impact on a process.

Predetermined designations and lifestyles contributed to the idea of what Keeney (2015) described as rural. Opinions about rural and urban classification have differed widely depending on different agencies and the number of residents of an area. Rural and urban designations seem to present measurable attributes common to larger and smaller communities and can be compared following the consistent use of the defined rural area. For the Alaska area, I could not find the origin of the term "hub community" but have heard it frequently when talking with people from Alaska communities. Larger communities have been dubbed "hub communities," and all Alaska regions have them. Examples include Bethel with a variable population of 17,000 (United States Census, n.d.b) and Anchorage with a population of 291,829 (United States Census, n.d.a). In this research, the identified hub communities include Kenai, Soldotna, and Homer. These hubs have more services, infrastructure, and commerce than the smaller communities and tend to act as the rural-urban interface for people commuting from one place to another. Even though there may not have been a standard designation or population threshold to define this phenomenon, this interface has made the purpose of transportation essential in Alaska.

My research included the Kenai Peninsula and its small rural communities, which were designated entirely as rural by the U.S. Census Bureau but as urban by agencies such as U.S. Fish and Wildlife Service. Comparing subsistence determinations to census demographics was one method to capture the difference between ideas of urbanity and rurality in Alaska. The idea

that Kenai Peninsula communities are connected to the road system in Alaska suggests that communities connected to roads have urban attributes such as street lights and access to commerce. The idea is a common discussion in subsistence processes based on the Alaska National Interest Land Conservation Act of 1980, which relied on population thresholds to determine whether a community is urban or rural (Wolfe, 2003). The process has provided a method to evaluate communities based on how community members interact with neighboring places to describe rural and urban conditions. The assessment of interaction resembles the approach of Keeney (2015) but includes aggregation as a method of evaluation. For example, when community members travel to other communities for work, commerce, or access to schools, they are classified as *aggregated*, which changes the classification of the community from rural to urban, based on the ability to travel from one place to another (Wolfe, 2003). The process has a clear relationship with the transportation infrastructure in an area.

An excellent example of community aggregation was the community of Clam Gulch on the Kenai Peninsula. During the evaluation, the community did not have a school, and the majority of the workers commuted to other communities to access education and economic opportunities. According to the U.S. Census Bureau (2010c), the population of Clam Gulch consisted of 176 people, and the community had an urban determination because of the application of aggregation (U.S. Department of the Interior, n.d.). The classification demonstrates that the evaluation of rural and urban can become skewed if it is not defined considering the application of e determination.

In terms of rural and urban definitions of transportation infrastructure, the Alaska Department of Transportation and Public Facilities (n.d.) defined urban areas as areas with a population of 5,000 people or more. The definition modified their definition with population

designations determined by the State of Alaska to include "urban clusters" (p.1) that identify a population as urban when population ranges from 2,500 to 5,000 people. The City of Kenai is within the study area and is one of the larger industrial areas on the Kenai Peninsula. It is not listed as an urban environment, with a population of 4,921 people, however neighboring communities (such as Soldotna with a population of 6,526 people) were listed as urban clusters (Alaska Department of Transportation and Public Facilities, n.d.). This additional designation demonstrates a notable change from the previous definition of rural or urban and reflects frameworks for larger and smaller population areas in Alaska.

At the time of this study, the Kenai Peninsula's larger cities included Homer and Soldotna, which have infrastructures such as schools and hospitals, while the smaller communities do not. Based on these ideas and the application of population clusters, the Kenai Peninsula represents both urban and rural areas based on population and hub-type communities. The urban areas on the Kenai Peninsula were represented by the larger hub communities of Kenai, Soldotna, and Homer, while rural communities were represented by the smaller outlying communities based on large cluster populations

3.2 Transportation Infrastructure

Ideas of transportation infrastructure in Alaska have been as diverse as ideas of the urban-rural divide. The defined area associated with the research includes roads owned and maintained by different groups that included private efforts, different agencies, the state, and the borough. The Kenai Peninsula Borough and the State of Alaska manage roads in that area designated as the Central Region. These roadways consisted of a total of 1,300 miles of road (Alaska Department of Transportation and Public Facilities, 2016). The Kenai Peninsula and State of Alaska sources suggest that the infrastructure within the study area consists of approximately

three miles of rural road to each mile of urban road, based on the urban-cluster criteria. The next largest transportation organization was the Borough, which managed 1,350 miles of roads and includes road infrastructure that is not owned or managed by the state. The borough road system included approximately four miles of urban road to every mile of rural road, introducing a different rural-urban ratio than those roads managed by the State (Alaska Department of Transportation and Public Facilities, 2016). The Kenai Peninsula Borough performed maintenance to maintain approximately 630 miles of road, of which 32 miles were paved (Kenai Peninsula Borough, 2018) as compared to the nearly 650 paved miles managed by the State on the Kenai Peninsula. The most significant state-maintained roads included the Seward Highway, the Sterling Highway, and the Kenai Spur Highway (HDR Alaska, 2003).

Keeney's (2015) definitions suggested that traits such as owning a car have become essential for rural populations to access urban services. When this idea is evaluated, it is noted that rural communities on the Kenai Peninsula have shown a similar need to access modern services using private vehicles. The most current compiled data available states that the Kenai Peninsula Borough has 101,959 registered road use vehicles in 2014 (Alaska Division of Motor Vehicles, 2017). The borough population consisted of 55,556 people in 2014 (Population U.S., 2016). This data also provides an estimated number of households to be approximately 21,481 between 2012 and 2016 (United States Census, n.d.c). The number of vehicles registered compared to the population also supports the views presented by Keeney (2015), demonstrating that the population uses the transportation system and that there is a significant personal expense associated with general living conditions. The data identifies nearly two registered road use vehicles registered on the Kenai Peninsula per person identified in the boroughs population documentation. More recent data would help support this conclusion; however, the data is

limited because of different rates of completing annual data submissions from the government based processes and evaluating population forecasts provided by the decennial census data.

Despite these identifiable components, transportation infrastructure information does not appear to be shared between state, federal, and borough organizations managing different transportation routes. The process made identifying qualitative attributes that reflect what people want and how they feel about transportation issues dependent on the forum where public comments were submitted. It seems that it is partly because decision-makers, such as the State of Alaska, have not kept records of public comments (S. J. Bushong, personal communication, February 5, 2018). The absence of records makes comparing secondary sources impracticable and questionable in terms of reliability and spatial relationships regarding who owns different roads. Different types of data are used by the state and borough to plan, build, and maintain transportation systems. Many of the roads indicate that they are also associated with federal subsidies. Each presents data sets that are related to their interest even though the road systems are located in the same communities and regions. The use of the different types of documentation about the public process creates a disconnect of comparable data. Qualitative values are dependent on the people who are associated with it in terms of their own perspective that should be captured in the documentation as representative data. In some contexts, a rural resident may not like specific infrastructure that increases traffic, while urban residents may like the same infrastructure because it provides access to workplaces or commerce opportunities. While both are qualitative values, they do not agree.

Some research suggests that community-based transportation models have also been limited by the engineered designs used to plan and construct them. Singleton (2011) first questioned the design and construction methods that have been used in transportation

construction work. Berman (n.d.) took the process of design and construction and applied it to the village communities. Both Berman and Singleton concluded that the new construction methods were cost-effective ways to address transportation issues in a large state like Alaska. Berman felt that by addressing transportation issues, these methods could also help rural communities address other problems, such as energy use, sanitation, and clean water.

The ratio of roads compared to the size of the state establishes infrastructure and demonstrates infrastructure priority in each area. The data leads logically to an evaluation of the amount of road that has been constructed and maintained, which Fried (1999) analyzed. Rusty (2008) pointed out that Alaska is approximately 11 times larger than Illinois. When compared to the miles of road that had been developed in the two states, Rusty found that Illinois contained 140,000 miles of roadways to Alaska's 15,718 miles (Alaska Department of Transportation and Public Facilities, 2016). The differences in data support the views provided by Berman and Singleton, suggesting that transportation infrastructure contributes to impersonal types of infrastructure development and sustainability, such as meeting needs for water and energy distribution.

In the relationship between development and infrastructure, Singleton (2011) addressed concluded that transportation infrastructure success is limited by the design that is used in creating transportation infrastructure. He used specific engineering criteria that increased in cost and structural integrity that demonstrated a direct effect on costs to support his argument that described how engineering could limit the feasibility of projects. The assembly of a request to bid a competitive contract is the first step in the construction process that evaluates and forecasts the cost of performing work. The bidding process outlines how the work will be performed and

will identify the adequate engineering and construction standards for the type of work performed. Different engineered designs represent different costs and limits associated with development.

Considering Singleton's process, an increase in technical construction developed through engineering will increase the cost of infrastructure development and may limit infrastructure development as a single limiting factor. Examples, according to the Alaska Department of Transportation and Public Facilities (2013), estimated construction length in the Yukon-Kuskokwim Region at 600 miles with an estimated cost of $6,000,000,000. This was approximately $1,000,000,000 per 100 miles of road or $10,000,000 per mile of road. These estimates were just over half as much as those estimated for the Nome to Manley Hot Springs project, for which costs were estimated at $3,000,000,000 for 500 miles of road, or approximately $6,000,000 per mile of road (Cockerham, 2010). The Goldstream project used new innovative construction techniques that reduced costs to $6,800,000 per mile (Allen, 2013). These examples are located in different regions across Alaska and reflect the variety of costs associated with road construction efforts. Due to the vast land base in Alaska and the variety of construction costs required at different regions, it is unlikely that the relationship between cost, infrastructure, transportation models, and sustainability can be evaluated on a large scale. The literature suggests that the development models need to be evaluated in local areas to determine the cost – model relationship.

Current static cost data is also limited because of the slow development of transportation infrastructure projects in Alaska and more limited in specific locations because new construction projects do not occur very often, and costs change with material availability and inflation. If many projects happened in a short timeframe in a local area, then it would be a more representative evaluation that would identify public inputs and how they were considered in the

process. Often the planning can take years. The long term process creates difficulties in measuring public input in terms of immediate opinions or opinions that emerge over time. The examples represent an adequate temporal relationship of four years, but the spatial area is too large to represent Singleton's and Berman's conclusions.

3.3 Public Involvement

Communities on the Kenai Peninsula range in size from small villages to urban centers that acted as regional hubs and provided services to communities. This mixture of rural and urban areas is similar to the model used by Gottstein (2005), who examined the specialized efforts of nonprofit organizations, consortia, and oversight to address community needs. Gottstein's model suggests that urban and rural contexts are similar and perform their own locally specialized efforts from each group to work with these organizations. Information about how needs are met suggests that it comes from qualitative priorities, or are integrated from efforts from outside the community.

Gottstein's (2005) model also suggests that there are other kinds of supporting data, such as people's opinions and subsequent choices. The Idea of choices is supported by researchers such as Keeney (2015), who discussed how people relocated based on available services in a local area. In this research, the population estimates indicate that the population across the Kenai Peninsula, in all measured areas, was stable (State of Alaska Department of Labor and Workforce Development, 2018), suggesting that the population is within adequate service areas.

Wiszniak (2014) discussed a more complicated relationship between population, community growth, and the interest and acceptance of transportation development in a community that results in a change. He reported that growth was represented in an immediate and identified change as transportation infrastructure expanded, although there was little

supporting research that suggested that the transportation change would be immediately identifiable. Wiszniak reported that the acceptance by the local population created an immediate growth indicator and identified a need for expansion from the starting point of establishing the transportation infrastructure. He also reported a gap in data-driven support, suggesting that the availability of records and documents to evaluate public perception is a more significant problem associated with transportation evaluation. The data from the Kenai Peninsula Borough suggests that the development has not presented new growth that would promote identifiable change. It was also not noted in community population changes.

These researchers identify that community growth associated with transportation may not always be represented well. Supporting information provides details about the relationship of growth as noted and discussed at local meetings that recognized immediate changes in transportation systems. One example identified changes in transportation performance,

> Board Member McLane commented …New growth in the Central region is due to new subdivisions at the end of the roads we have been maintaining, and the traffic has increased. Community College Drive during break-up has part of its road underwater. (Kenai Peninsula Road Service Area Board, 2005, p.3)

The differences in how communities contribute to transportation processes define the common themes associated with transportation need, use, and development. The distances between communities in Alaska are much greater than those typically seen in the continental states. Several areas across the Kenai Peninsula require a commute of 35 miles or more to obtain gasoline, food, and access to commerce. These areas also rely on heating oil delivered over greater distances because of the location of vendors and their clients.

In some cases, Alaska simply had no road access for communities, and alternative modes of transportation were expensive and problematic. The process created issues such as crossing wetlands, streams, and access by boat, leaving some small outlying areas on the Kenai Peninsula that has only seasonal access. These areas include the north side of Tustumena Lake, islands on Skilak Lake, and access to the Caribou Hills. However, the majority of the Kenai Peninsula is accessible by road.

Case studies presented by Wiszniak (2014) suggest that there are common community interests in addition to how a community feels about development. The combination of these ideas creates a network of perspectives and priorities that represent what was commonly accepted as successful. The assembly of community ideas based on community values, perceived concepts, and the application of efforts creates a separate related idea of what is important to community members and is a foundation of qualitative data attributes represented by common themes.

Planning documents used by the Federal Highway Administration (2015) and the Kenai Peninsula Borough Planning Department (2017) referred to performing a public process effort to capture the public views. Still, neither process provided documentation of data acquisition or described standards to determine whether public input may be accurate, valuable, or have lasting effects on populations. For example, in its transportation plan, the City of Homer (2005) recognized that there was a rural component to their planning process and described the road system in Homer as rural. With that noted, there were only two references to public input in the planning process. One was that snow removal was a priority because the public would not tolerate it not being a priority.

The City of Homer recorded one comment in their transportation plan. The comment focused on a need for a transit system for access to the business district for "local residents and seasonal visitors" (City of Homer, 2005, p. 56). It was also noted that the development of such efforts was outside the scope of the planning. The plan did not discuss supporting information regarding a public process, community desires, or the evaluations of the merits of the public process. The Kenai Peninsula Borough transportation plan had a similarly constructed public process but offered more information about specific public comments. According to the Borough's transportation plan, the primary transportation comments were about the development of bicycle paths and trails; and the plan offered no information about the public process or how comments were evaluated (HDR Alaska, 2003). There were several references to on-site reviews to evaluate improvements, which suggested that the Borough was undertaking a significant decision-making process (HDR Alaska, 2003), yet no record of this was found. It was also noted that no comments were not listed within the plan that described qualitative information about transportation infrastructure.

Additionally, no published plans are available from the Cities of Soldotna and Kenai (Alaska Department of Transportation and Public Facilities, n.d.). The documentation reviewed demonstrates that a planning process was considered in the Kenai Peninsula Borough and supported by discussions such as,

> Bill Williamson, PO Box 2633, Seward, AK 99664 (01.38)
>
> Mr. Williamson is Seward Bear Creek Flood Service Area (SBCFSA) board Chairman. They are working on a long-term sediment management plans that includes removing debris under bridges and sediment maintenance plan. Streambeds have build-up of gravel disturbing water flow, which creates flooding in subdivisions. The biggest problem areas

are Lost Creek and Kwechak Creek. They would like to develop a working relationship with the road service area on future mitigation projects. (Kenai Peninsula Road Service Area Board, 2013, p. 2)

Despite numerous references to planning processes within the documents themselves, information on how transportation decisions were made, how priorities were developed, or how public comments were addressed were not readily available. The references left many unanswered questions about these processes and gaps in finding out how development started. Early planning documents seem to set the stage for public involvement and indicated that developing rural infrastructure was "not justified" (Pernela, 1976, p. 10). Research suggests that the development of planned infrastructure has more significant effects across the state, and long-term evaluations are needed.

3.4 Documented Perceptions

Planning efforts have been undertaken by local and state governments and a few local groups to participate in public involvement on the Kenai Peninsula. As noted earlier, the State of Alaska has not archived public comments and so has left no records of the public interaction to be evaluated (S. J. Bushong, personal communication, February 5, 2018). The Kenai Peninsula Borough provided public transportation meetings thorough the RSA Board to discuss transportation issues, and the State of Alaska requested comments on projects and posted them on the regional Department of Transportation website. While each of these processes provided an opportunity for the public to make comments about transportation issues, neither provided the public with the ability to make decisions about the outcomes of infrastructure development.

A review of information about transportation detailed in the RSA meeting documents was one of the only ways to obtain data from the public that documented rural and urban interaction

and provided a consistent method for public comment. At the time of the study, most rural communities on the Kenai Peninsula did not have dedicated professional planners and did not publish the results of public processes. Community members have had views to express, as demonstrated by the Cook Inlet Keeper's (2018b) efforts at grassroots recruitment of community members to comment on planning activities.

Perceptions of the Kenai Peninsula were reviewed in the documentation of the RSA Board and included the previous 15 years of meeting minutes. The records included 1,180 identified roadwork topics and documented 159 public comments that represented qualitative data from the public from 2013 to 2018 (Kenai Peninsula Borough RSA Board, 2003–2018). The review of transportation processes used as a basis to develop road construction miles was straightforward. The evaluation of perceptions and attempts to capture the qualitative aspects of these processes requires documentation and a longer span of time to identify a spatial and temporal framework of change. A review of community perceptions was based on statements and impressions delivered and documented at public meetings. The Kenai Peninsula Borough transportation effort lead by the RSA Board developed local documentation and written records articulating how transportation input processes were performed. The RSA Board process also provided recommendations to address transportation issues.

The historical documentation represented by the RSA provided a forum to the public to discuss issues and give opinions about road needs and work that needed to be performed. Each year provided at least ten meetings hosted during different months of the year. The process includes documentation of local areas associated with defined spatial parameters and time frames that can capture the slow growth of transportation systems in Alaska.

The RSA documentation provides a record of detailed information that provided an opportunity to present qualitative or quantitative values for individual comments that were associated with the place they were from and the transportation issue that was being addressed. Some examples included comments requesting that roads be graded and sanded before 7:00 am on school days and descriptions about events that included,

> One icy day, a few weeks ago he explains, there were several vehicles off in the ditch because of icy road conditions and one, in particular, had six kids in it and ended up in the ditch upside down on the hood of the truck. (Kenai Peninsula Borough Road Board, 2016, p. 2)

Each of these examples presents a common theme presenting safety issues in sanding and icy road conditions. Several of the documented comments expressed information about multiple topics. For example, one comment stated,

> The road is narrow, leaving nowhere for the grader to push snow. A property owner has stacked up brush on both sides on a section of Pinnacle View Road, reducing the width to one lane. Pinnacle View Road is heavily traveled during the summer from traffic entering AK State Park property that provides access to the beach. (Kenai Peninsula Road service Board, 2014, p. 2)

This example identifies concerns about safety from a narrow road, maintenance from snow removal, and property issues from people stacking debris in the roadway. The comment context suggests that all problems being expressed are a safety concern, and the commenter presents a desire to have something done to correct it. Each comment topic was identified, tracked, and counted individually. This process helped to establish codes such as safety or costs as significant categories in the framework associated with transportation perceptions and issues

expressed in the record. These significant categories were ultimately defined as *safety issues, property issues, economic issues, development, requests for information, basic needs,* and *personal issues*.

Other notable properties within the meeting minutes were the summarization of public commentary and significant changes to the level of detail in the documented public comments. For example, I had participated in a Kenai Peninsula Borough public roads meeting in August 2012, and my comments and input were summarized to the point where they were redacted (Kenai Peninsula Borough RSA Board, 2012). Despite this personal experience, the summaries were still able to provide an adequate record of public input based on summaries of discussions.

A total of 101 qualitative comments were identified in the process form 2003 through 2014. The timeframe represented approximately 0.17% of the residents on the Kenai Peninsula (Kenai Peninsula Borough Planning Department, 2017). The low percentage of participation suggests that there may not have been an interest in transportation issues, that all transportation needs were satisfied, that there was a lack of confidence in the process, or that there was a lack of effort to recruit comments and opinions at the borough level. There was no data that identified information about participation.

Early in the review, the Kenai Peninsula RSA Board meeting commented about updating their transportation plan in 2003 based on two public hearings and internet-based public comments gathered in an online effort that was summarized by the Kenai Peninsula Borough's Attorney. It was noted that the results were not documented publicly and were only distributed to the RSA Board (Kenai Peninsula Borough RSA Board, 2003). The initiation of this process resulted in a published planning effort. Still, little information was found that described how the plan was developed and the degree of the public process involved to create it.

3.5 Tribal Transportation Plans

The diversity of the Kenai Peninsula communities included federally recognized tribes that participated in transportation planning differently from other communities leaving little comparative data for review. The tribes included in this research included the Kenaitze Indian Tribe, Ninilchik Village Tribe, and Seldovia Village Tribe. Tribal involvement was specifically different from community involvement because tribes developed transportation plans as part of the Tribal Transportation Program (2016). The tribal component of transportation is a unique transportation plan, belongs to the Tribe, and contributes to the overall transportation infrastructure and development in local areas. There are several areas in Alaska where tribal transportation planning components, are the only transportation components. This process is also directly tied to public transportation because funding can only be spent on public use roads. The regulations for the program considers that decisions about transportation are delivered from the tribal leadership and generally operate on a community scale that is specific to the goals of the tribe. The process includes public transportation efforts. The program also provides a specific opportunity for the public to comment on tribal planning decisions (Tribal Transportation Program, 2016). Comments that included Alaska Native interests include inferences such as,

> Director Davis said that the majority of these roads have a number of residents on them, such as Khamsin, Clarence Drive, Foehn Court. On the Grandview Heights roads, Director Davis explained to the Salamatof Native Association that we would put them on temporary maintenance because they do meet standards at this time, they just didn't meet a deadline. (Kenai Peninsula Road Service Area Board, 2004, p. 4)

Several reviews of the literature have discussed the accomplishments made by Indigenous leaders as acts of determination based on the intent to accomplish their own goals (National Association of Development Organizations Research Foundation, 2011). On a larger

scale, indigenous people have often been described as "handicapped by the consequences of history," and having difficulty accomplishing goals (Cornell, 2010 p. 356). These evaluations seem to be dependent on the capacity of local areas to engage in federal funding efforts. A typical role of tribal governments has been to provide for the needs of the tribe and act as a financial resource with the ability to pursue federal funding, accommodate community growth, and provide economic gains in terms of jobs (Chignik Lagoon Village Council & A. N. Gottschalk & Associates, 2004). The descriptions found in research and planning documents demonstrates that the experiences of the tribe create a unique network of individual goals that are specific to the entity and is represented as a privately driven transportation effort established by tribes.

Tribal roles in transportation development have been part of the overall contribution of transportation efforts in the study area and have relied on decisions made by the tribal community itself. Tribal participation includes the association and use of state routes, cooperative work efforts, and formal consultations about proposed work. Participation from tribes is different from other government efforts, because of the relationships that tribes have with the federal government and in guiding regulations such as the regulations that guide the use of funding in the Tribal Transportation Program (2016). The State of Alaska has also recognized the role of tribal participation and issued a letter supporting tribal participation in transportation infrastructure processes to benefit public infrastructure in Alaska (Luiken, 2018). Because the relationship is different from other government-driven development, it is considered a private effort that is determined by tribal leadership and intended to benefit the tribe's members. These efforts and documents are noteworthy in a transportation evaluation, and each tribe has engaged in different types of transportation activities. Little documentation has been made available to

evaluate public participation, projects, or impacts related to the Tribal processes on the Kenai Peninsula. Most likely, it is because of the small amount of funding that tribes receive represents a few hundred thousand dollars in an area where road projects cost millions of dollars per mile. The secondary reason suggests that there is a low amount of participation in Tribal public transportation meetings.

Tribal transportation provides planning documents that are updated every five years (25CFR170, 2016). The planning performed by tribes also does not reference the overlap or note the effects that the planning and proposed work may have on other connected road systems. The tribal programs have the potential to engage federal opportunities, but significant funding sources are rarely available to tribes.

3.6 Economic Costs

There are several ways to measure the economic value of transportation development. One example way is to identify the associated costs of a common theme, such as health care. Health care, as an example, provides both service use data and well-documented cost estimates. According to Wholforth (2017), health care costs in Alaska have become elevated from excessive profit and compensation, which has been partially due to the lack of competitive business that helps regulate costs. Research suggests that there are methods to identify costs associated with service needs. The significance of costs, in the context of my research, included whether costs provided value as an attribute and would be related to transportation planning efforts.

Medicaid documents showed the need for transportation as part of health care. According to the *Alaska Medicaid 2015 Annual Report* (State of Alaska Department of Health and Social Services, 2016), the service provided travel to get people to healthcare that were unavailable

locally. The data presented were divided into service districts and provided district costs, the number of transportation services offered, and the cost of the transportation services. The data displayed is divided into service districts that are based on senate districts Kenai O, and Kenai P. Table 1 details the district costs, the number of transportation services offered, and the cost of the transportation services during 2015 and is based on 27 individual means of transport. These cost data for medical transport are detailed in Table 1.

Table 1

Medicaid Transportation Costs, 2015

			Transportation		
Medicaid district	No. transports	District cost[a]	Cost[a]	Per transport	% of district cost
Fairbanks A	21	56.9	1.3	0.06	2.3
Fairbanks B	6	29.0	0.8	0.13	2.8
Fairbanks C	12	34.7	3.8	0.32	11.0
Mat-Su D	7	61.2	0.7	0.10	1.1
Mat-Su E	8	54.9	0.7	0.09	1.3
Mat-Su F	4	72.1	0.7	0.18	1.0
Anchorage G	0	20.3	0.1	0.00	0.5
Anchorage H	1	88.3	0.7	0.70	0.8
Anchorage I	12	73.0	0.7	0.06	1.0
Anchorage J	19	139.7	1.3	0.07	0.9
Anchorage K	10	44.6	0.3	0.03	0.7
Anchorage L	8	50.2	0.3	0.04	0.6
Anchorage M	2	48.2	0.3	0.15	0.6
Anchorage N	0	32.4	0.2	0.00	0.6
Kenai O	9	110.7	2.0	0.22	1.8
Kenai P	18	65.9	2.5	0.14	3.8
Juneau Q	10	70.1	2.7	0.27	3.9
Sitka R	28	79.4	6.4	0.23	8.1
Bristol Bay S	34	88.8	18.1	0.53	20.4
Bering Straits T	12	199.9	28.4	2.37	14.2
Total	221	1420.3	72.0	5.68	5.1

Note. From *Alaska Medicaid 2015 Annual Report* (p.59-79), by the State of Alaska Department of Health and Social Services, 2016, retrieved from http://dhss.alaska.gov/dhcs/Documents/PDF/Alaska-Medicaid-Annual-Report-SFY2015.pdf.

[a] Millions of dollars.

Wholforth (2017) reported an economic relationship between transportation costs and the findings of researchers who identified costs associated with service needs. The significance of

the Medicaid data was that they helped define the costs of transportation in terms of services and cost in dollars.

The regional data indicated that the costs were less in areas associated with transportation infrastructure than in the regions that relied on alternate modes of transportation. Data also shows that the same relationship would hold on a smaller scale, such as in the Kenai Peninsula's urban clusters and rural communities. According to the State of Alaska Department of Health and Social Services (2016), the costs documented for the Kenai Peninsula district were $176,600,000. It seems likely that the funding used to transport Medicaid patients alone would be a substantial planning consideration to reduce health care costs, provide access to services, and justify transportation planning and development.

Other documentation supported this idea of cost and value. According to the Alaska Division of Public Health (2016), the availability and cost of transportation were "one of the most common issues" (p. III-9) found in its interviews. It also found that the average transportation cost of accessing a medical center was $1,000. The Alaska Division of Public Health pointed out that this financial burden was exceptionally high when people were trying to access specialized care providers. The example of access to services such as health care was not supported as a justification for cost-effective connection options in communities that have reduced transportation ability.

Recent developments in transportation infrastructure in Alaska have included the maintenance and upkeep of existing infrastructure as a primary strategy to offer transportation stability, and data shows little growth in terms of new development. According to an economic analysis by Fried (1999), the transportation industry in Alaska employs nearly twice as many people per capita as the contiguous states. This disparity raises questions about the effort

required to maintain transportation corridors and evaluate potential development in Alaska. The local RSA held many discussions about costs including,

> Will Josey, PO Box 881, Sterling, AK 99672
>
> In 2000, Assessor Clyde Johnson, Al Goings and himself met with a contractor who paved Feuding Lane. After reviewing the Kenai Keys road the contractor stated he could pave it for $200,000. He does not understand how the job now is currently estimated at $1 million. (Kenai Peninsula Borough Road Service Area Board, 2005, p. 2)

According to the State of Alaska's Office of Management and Budget ([OMB] 2016), for the fiscal year 2017, the state addressed 119 allocations and appropriations through the Department of Transportation and Public Facilities. While the state budget predicted spending $218,000,000 in the fiscal year 2017, the majority of these projects were contingent on additional federal funding or the use of state matching funds to receive the additional federal funds. Comparing the state budget to the findings of Brehmer (2015), the state budget represented nearly half of the federal funding forecasted for the fiscal year 2017. The comparison raises several questions about the ability to leverage federal funding, given the shortfalls in the state's budget seen in previous years.

3.7 Growth and Sustainability

Retention and attrition in a community encompass the normal rate of growth but are also affected by smaller relationships. The availability of services, as acknowledged by Keeney (2015), contributes to the reasons why people relocate. Wiszniak (2014) found that the relationship between community growth and transportation had a significant influence on the development of the community. According to Wiszniak, when the interest and acceptance of transportation development form a community is immediate, it identifies that there was a need

for the expansion. This idea of transportation development acceptance supports the use of qualitative measures to evaluate quantitative growth. These data are intended to capture the expressions and the desires of people. The "build it, and they will come," social attitude also affects community stability. According to Wiszniak, support comes from the availability of transportation infrastructure and the ability to use it at a reasonable cost on a regular schedule. The literature suggests that it represents several ideas related to community, planning, and growth as common traits associated with the identified needs for transportation changes and development.

Transportation development on the Kenai Peninsula presents similar needs. The Kenai Peninsula Borough has introduced concepts similar to those expressed by Wiszniak (2014) to increase connectivity within the borough and to expand transportation options to "ensure long term sustainability" (Kenai Peninsula Borough Planning Department, 2017, p. 9). The Kenai Peninsula Borough Planning Department (2017) also recognized the relationship between transportation development and sustainability as one that could affect disadvantaged drivers, services, and general connectivity. It would compete with current transportation capacity and forecast trends for sustainability evaluation. The Kenai Peninsula Borough Planning Department reported that the overall income of the area included $3,060,000,000 in personal income and stated that business and self-employment efforts had declined 10% since 2016. According to borough planners, declining trends in funding sources raised questions about how the Kenai Peninsula will be able to maintain existing infrastructure and pointed to reducing efforts toward creating additional transportation resources (Kenai Peninsula Borough Planning Department, 2017).

Transportation services are important to how transportation benefits communities. According to Shoup and Homa (2010), successful case studies addressing transportation improvements included other related data, including land-use plans, changes in infrastructure, and the implementation of public transportation services. These case studies demonstrated positive results in relationships between transportation infrastructure and the buy-in of community residents who use it. Planning is not necessarily measured in terms of sustainability and may be based on criteria such as public use, community input, or the numbers of people who make up the user group. Shoup and Homa (2010) discussed successful implementations of rural transportation within these frameworks, even though their results were based on a different geographic area, the literature including transit case studies in the continental United States including connectivity areas in New Hampshire, Florida, Colorado and in Juneau Alaska. The results captured similar commonalities of diverse populations and outlined successful implementations of transportation planning efforts similar to those proposed in the Kenai Peninsula Borough's comprehensive planning effort (Kenai Peninsula Borough Planning Department, 2017).

Other data supports the needs-based approach to identify what general acceptance is expressed by the community itself. Hamby (2012) found that the measured results of rural transportation planning and development efforts had a per capita relationship that was related to both need and demand. The belief expressed by a portion of the general population can reduce the ability of underrepresented communities to have their needs heard when competing with larger communities, creating an unbalanced weight in the process. The research also supports the idea that community-based relationships are comparative even if there is a significant change in

community populations. The finding supports planning efforts undertaken prior to growth helps support the per capita relationship and sustainability.

Several individual community expressions also contribute to community sustainability. The U.S. Department of Health and Human Services (2004) summarized Maslow's Hierarchy of Needs to frame the individual items necessary for people to feel secure and reduce instances of community attrition. Population changes are projected using data such as age groups, growth, and census areas. According to Williams (1999), several regions in Alaska are projected to experience attrition by 2018. The Kenai Peninsula was not one of them. According to the Institute of Social and Economic Research (2001), the Kenai Peninsula has experienced a decline in employment and that this decline has not been as severe as in other regions of Alaska (Guettabi, 2018).

According to Hunsinger (2007), the projected decline in population across several regions in Alaska would continue through 2030, creating a transition from rural settings to urban environments. The reasons for the community decline were not completely clear, and according to Hunsinger, the overall population in Alaska would continue to grow to over 800,000 by 2030. Noting the variables in the study that include birth and death rates, these projections suggest that there will be a continued shift from Alaska's rural communities to larger urbanized hub locations. Hunsinger's idea is also related to static transportation routes. Literature supports the concept where changes in transportation also change population dynamics. The new development would change forecasted population dynamics and may lead to new opportunities for people. With the current infrastructure, population shifts will have effects on both rural and urban environments through respective growth and attrition. The Kenai Peninsula was not forecast to experience a

population decline, and links to adequate transportation may become more critical as the area experiences growth.

Each researcher identifies communities and provides different ways to define community type. Literature supports quantitative values are represented by the actual miles of constructed roads and provide different qualitative contributions and reactions from communities. Other factors identified costs as a notable component associated with transportation development. The literature demonstrates that there is a significant investment by the general population of the Kenai Peninsula to use the transportation system as indicated by the number of registered vehicles, demonstrating that the quantitative value of need is represented in terms of use. Logically, the literature supports the research question and hypothesis proposed in this research.

Chapter 4

Conceptual Frameworks

In this research, I explored data between transportation advisement developed in a public environment and communities to explain what relationships are identified, and to help understand common traits that present a connection with the human aspects of transportation. The process included the use of an exploratory sequential mixed-methods design. I collected both quantitative and qualitative data from documented meeting minutes to identify and describe the relationships between transportation development, its quantitative effects, and perceptions of those effects expressed by people. I extracted public comments from meeting minutes and sorted them by topic. The data collection created individual categories within each annual time frame that defined common traits. The method included data review and basic statistical evaluation based on measurable information gathered from the research. The qualitative aspect of the mixed methods design identified the expressions presented by individuals. The documentation provided information about the communities that communicated needs, opinions, and desires associated with transportation opinions.

There were two data sources for the study. The first source was the available archived public meeting records documented by the Kenai Peninsula Borough RSA Board that included opinions, topics, and development records. The secondary source included primary data collected from the grassroots public meeting Sponsored by Cook Inlet Keeper that included random individuals in attendance. The collection of data included referencing individuals and organizations who participated in documented public events. Quantitative data was noted by areas that were identified as road work areas.

The data also yielded an overview of transportation trends around a 70-mile-long section of road in a road connected study area of South Central Alaska. Identifying trends related to the qualitative subjects helped identify attributes. The concept includes identifying attributes and evaluating them over time to identify change. When trends were evaluated, it was noted that there were additional relationships and measurable changes in the identified attributes. These findings were not the intent of the research. The primary goal of the research was to identify common traits. However, it did identify a trending pattern that may provide more information for additional research. These data identified positive or negative effects according to shifts in relationships identified and compared to the amount of interest expressed about specific topics.

The data gathered from the RSA meetings provided details about transportation efforts that affect individuals across the Kenai Peninsula. Communities made some notable efforts, and other data was provided through the government process that decided where transportation work would be performed. Correlations regarding the qualitative belief described by Hamby (2012) presented results about the general population accepting outside decision makers goals that appeared to be valid for a community experiencing growth. The conceptual framework is intended to follow a similar emergent evaluation of acceptance or rejection. The study area has identified stability with no significant growth but suggests that there are general shifts in population within the study area.

Planning for the development of transportation projects can have undesirable impacts on a community. While some communities within the study area may have had different ideas about what success is, the identification of common traits defined perceived needs and actual change. Different ideas occurred many times in the Kenai Peninsula Borough transportation meeting

reviews when identified roadwork consisted of suspending maintenance activities or being asked not to perform different types of work.

4.1 Frameworks

As a mixed methods design, the quantitative data identified traits that were related to perceptions about transportation planning, development, and infrastructure. The critical theory framework embodies social ideas that are related to the Marxist theories of social process (Patton, 2015). Some researchers have stated that methods should be fair processes that apply to all. The idea of evaluating society and reviewing the effects of decisions that may not have been fair to everyone suggests that there is a need to redefine society to create change in terms of equitability (McLean & Stahl, 2007). Transportation issues seem to provide an idea of fairness for both large and small communities. Fairness may be expressed as improvements, the technical level of road designs, or directly in the number of road miles available to people who use them and define terms of equality. The qualitative attributes that people have about themselves and how they choose to live is also a part of this idea of fairness, and their expressions determine if the evaluation is fair or equitable. The framework for values includes rural and urban environments, where qualitative ideas about good and bad situations may differ.

The theory is a good fit if all of the attributes for each type of community are identified, considered, and evaluated based on Marxist theory. Therefore, identifying such traits and designating them as attributes is part of the emergent evaluation method. The initial assessment of critical processes of social inequality includes a need to analyze what the components are (Patton, 2015). The most prevalent components were the presence or absence of actual infrastructure use in terms of transportation issues identified by public comments to provide a comparative matrix. The initial steps to determine the relationship between drivers and

perception fit appropriately. The key components of this frame were the significance of common traits described as work areas and the comments documented by residents from rural and urban areas as defined by urban clusters.

Patton (2015) advocated the use of a conceptual approach to identify the types and amount of planning and involvement as a means to evaluate the meaning, consequences, and unanticipated information found in literature reviews. The conceptual framework provides guidelines and limits for the concepts used in the evaluation. The framework cannot discriminate between input, outcomes, or measurements and does distinguish between rural and urban environments in the data acquisition process. Each instance contributed equally.

These frameworks are also related to critical theory framework that embodies social ideas that are related to the Marxist theories of social process (Patton, 2015), and change theory that contribute to the identification of traits and perceptions to promote change through awareness. The framework relies on the identification of traits and perceptions of transportation for each topic identified. The conceptual framework helped link quantitative and quantitative data, as well as change over time.

The relationship between communities on the Kenai Peninsula and state and federal management associated with transportation development is a critical relationship. Patton (2015) pointed out that critical issues often help to identify an unbalanced relationship as an equality struggle, which suggests that the purpose of the issue is to change an established balance of power. This idea certainly provides some appeal for equality issues, but my research was intended to identify traits and relationships without weighting data, allowing data to emerge in its present condition. It included classification such as choices made by people to live in rural or urban environments. The identification of too many traits also represents an imbalance that could

support the discovery of other drivers, such as per capita population influence, for which rural and nonrural relationships become skewed. Considering that areas such as Soldotna population of 6,526 (Alaska Department of Transportation and Public Facilities, n.d.) had to vote on an issue in opposition to Clam Gulch that consists of 176 people (U.S. Department of the Interior, n.d.) and is unbalanced thirty-seven to one. Decisions made based on per capita population statistics do not always weigh other criteria such as economic benefit, community sustainability, and the impacts of community retention and attrition.

4.2 Attributes

I identified attributes by grouping similar types of comments. Comments delivered in the public process provided an opportunity for input, documentation of the kind of feedback, and determination of the type of input based on the evaluation of identified issues with shared meanings. For example, some comments suggested that there was a conflict between members of a group of people who identified as a community. The types of comments followed the idea suggested by Patton (2015) and McLean and Stahl (2007), suggesting that this type of issue indicates there is a need for change. My experience with this concept suggested that individual attributes are not very complex, and it would take several references for an issue to establish the meaning of a perceived unbalanced relationship in terms of finding different occurrences. A finding may express a desire to change from community members and may not be represented in long-term evaluation strategies needed to identify and address these types of issues.

The last conceptual framework evaluates attribute relationships and frames a discussion about what they are. This concept has also been expressed as an *impact* concerning change-oriented projects (Nesta, n.d.). Impact helps frame change even though the change may be considered good or bad, depending on the point of view. Identification of attributes included the

occurrence of changes in terms of work areas and was compared to events that may or may not have been presented in community planning meetings. It represented the presence or absence applied to information presented by individuals.

Transportation development is a slow process that takes place over periods of years. The timeframe suggests that the effects of development also span periods of years. Therefore, the identified attributes represent a temporal relationship. The use of change theory permitted analysis of the drivers associated with transportation changes to create a picture of the transportation process. This use of change theory is an adaptation of Lippitt's phases of change (Kritsonis, 2004). The ability to make change happen would come from creating awareness of the details identified in the evaluation of rural considerations associated with transportation development. Although other change theories include processes to organize change, my study revolved around drivers of change rather than social behaviors. The literature suggested that the establishment of attributes is definitive and would appropriately create drivers for change. In this research, the environment was made up of rural and urban communities, identifying drivers and evaluating input that defines the traits as quantified as values.

4.3 Materials

The materials I used consisted of secondary sources that documented the development of transportation infrastructure on the Kenai Peninsula. I gathered both qualitative and quantitative data from these materials. Archived data and historical documents provided both qualitative and quantitative data, which yielded results to identify community attributes.

Secondary sources provided the number of issues or comments that were recorded and permitted the identification of areas associated with planning and public comments. These sources provided a foundation for determining the degree of participation form rural and urban

communities and allow for the progressive development of mixed methods as described by Doran (2014). Doran describes this process as the progression of using qualitative aspects corresponding to raw data, such as the number of instances used to generate measurements. In this process, both qualitative and quantitative data obtained from these materials provided bases for comparison and would provide consistent results utilizing either value or theoretical research approaches (Alghatas, 2010).

The evaluation of the materials included a review of available sources, authenticity, credibility, and representativeness. Although there were questions about documentation, such as the accuracy of meeting minutes and how comments were summarized for records, the interpretation of the documents provides enough data to describe the public input received and what the information represented. The evaluation process was directly related to the authenticity of the material in terms of evaluating real documents that are common and available and can be seen every day. Input from the public provides unique scenarios and describes the treatment of comments and identifying nomenclature to obtain the meaning and intent of the remarks documented. The use of representativeness in the material demonstrates that the population resides within the Kenai Peninsula Borough and is located on the contiguous road system. Each record provided a measure of representativeness of the population in context considering the Kenai Peninsulas 15 year growth rate of 12% (State of Alaska Department of Labor and Workforce Development, 2018). The evaluation criteria identified both rural and urban residents, the actual place that the comment addressed, and the number of times it was addressed. Documents form the Kenai Peninsula Borough provided this direct population information. Other materials provided quantitative measurements, such as the number of vehicles registered in

the area, population information, and proposed work areas identified during the RSA meeting process.

Chapter 5

Methodology

The methods used to collect data consisted of identifying documented transportation infrastructure, reviewing archived data, and evaluating my observations made at public meetings. Several methods have been used to evaluate transportation development. Szucs (2015) found that statistical probability helps to determine the best choice for transportation development when it is based on user demands. In this approach, numerical data are evaluated with appropriate assumptions, but the approach does not take into consideration the effects of qualitative data, such as cultural incentives of rural or urban lifestyles. The method intends to identify qualitative relationships as it exists, and determine the significance of identifiable traits that are common and measurable.

5.1 Data Collection

The procedure for my mixed methods exploratory sequential design included the performing of each step before starting the next step (Schiazza, 2013, p. 26). The linear exploratory sequential process is intended to determine how inclusions of quantitative data in mixed methods designs provide better research results. (Cresswell, 2013). Data collection was made up of three parts. First, I acquired available archived data relevant to infrastructure and documented public opinions. Second, I performed data reduction by identifying data and comments regarding transportation projects that were under consideration at the time of the study. Third, I performed data transformation as described by Schiazza (2013, p. 39) to identify common themes that expressed similar issues to identify any common attributes expressed by community members for data analysis. The identification of themes was based on the

communicated meaning of individual comments documented by the Kenai Peninsula Borough RSA. Several efforts were made to classify comments using keyword identification. However, keyword identification missed comments because of the variety of expressions used in communicating and documenting comments. The contextual method was an effective approach to establish a way to evaluate transportation comments from people as measurable input. The method also considered spatial considerations incorporated as a data display stage early in the data-gathering process to allow for documenting qualitative data associated with urban or rural origins as described in the processes documented by Schiazza (2013, p. 38). After qualitative items were identified, quantitative values such as time frames, places, and the number of occurrences could be compared in context.

Data were processed by year and mapped. Mapping identified urban clusters and the communities within the study area and the areas where public comments addressed concerns. This process created a graphic representation of community areas identified as Census Designated Place (CDP) by the U.S. Census Bureau and as urban clusters used in the identification process determined by the state. Because of the large area evaluated in the research and the use of hundreds of road names as place designations, the mapping also established areas that are linked to specific transportation systems. The process delineated issues such as multiple road names, road name changes, and common names with designations such as lane or avenue.

Each group of comments representing a qualitative value was noted and listed as a comment. The comments were reviewed every year to determine if there was a qualitative value and identify what the value was. Summaries are listed in Appendix A. The comments were sorted by subject, and the area that the person identified where they lived was noted, defining rural and urban comments. The comments themselves identified common themes. For example, a

comment about traffic being too fast suggested a safety concern. Multiple comments that addressed similar conclusions suggested the coding and identification as an attribute. Data sorting was limited to comments that included more than one comment on a subject. Comments could be positive or negative. The common issue identified indicated the presence or absence of real or perceived problems as a code, and the data correlation developed into common indicators creating the attribute. Attributes were identified, measured, and compared to help identify relationships.

The process of determining expressed needs may address some of these issues but is not always documented in transportation evaluations. Further review indicated that the State of Alaska's OMB (2000) directed that information about projects be subject to regulatory guidelines such as the Freedom of Information Act and discussed the roles of state, local, and tribal governments as "major partners with the Federal Government in the collection, processing, and dissemination of information." The directive included an oversight requirement but did not provide a framework to perform the oversight process. The mixture of federal, borough, state, tribal, and private efforts, as a data-driven effort, restricted the research to choose one area of transportation oversight. The data gap in multi-agency transportation development excludes the ability to evaluate different areas based on specific input because not all private and government data were comparable.

Transportation needs were evaluated without consideration of issues such as empirical or cultural information. Cultural information, such as ethnicity, was not documented in the process. Cultural information may provide additional information about coding and data correlation based on how individual perceptions are influenced by their own experiences (Schiazza, 2013, p. 40). Cultural knowledge and ethnicity data documentation may also contribute to explanatory

research designs and expand the qualitative and quantitative relationship (Cresswell, 2013, p. 40). According to the Bureau of Transportation Statistics (2003), there were no mandated contributions regarding urban, rural, or cultural values associated with transportation evaluation in their statistical manual. They suggest creating special studies for data collection based on needs (Bureau of Transportation Statistics, 2003).

5.2 Participants and Location

Participants were limited to those on the Kenai Peninsula within the 70-mile spatial area identified for the research and included attendees of documented public meetings. The communities located within the study area included Clam Gulch, Ninilchik, Happy Valley, Anchor Point, Diamond Ridge, Homer, Kachemak, Fritz Creek, Kasilof, Kalifronsky, Soldotna, Funny River, Sterling, Ridgeway, Kenai, Salamatof, Nikiski, Point Possession, and Nikolaevsk. This area is geographically isolated and is similar to an island because only one 2-lane road connected the peninsula to the rest of Alaska. Roadways are highly used in this area. According to the Alaska Division of Motor Vehicles (2017), in 2014, 101,959 road-use vehicles were registered in Kenai Peninsula Borough for a population of just 55,556 (Population U.S., 2016). According to the U.S. Census Bureau (n.d.d.), there were approximately 21,481 households in the borough between 2012 and 2016 and indicates the use of multiple vehicles for households.

The criteria for having a fixed number of people and a significant number of road-use vehicles in a community offers a common framework for data consolidation (Schiazza, 2013, p. 40). Mapping complimented the identification of participants by defining the pinpoint designations of urban clusters and shows how community sprawl may be representative of participant areas where the residents have interests in an issue.

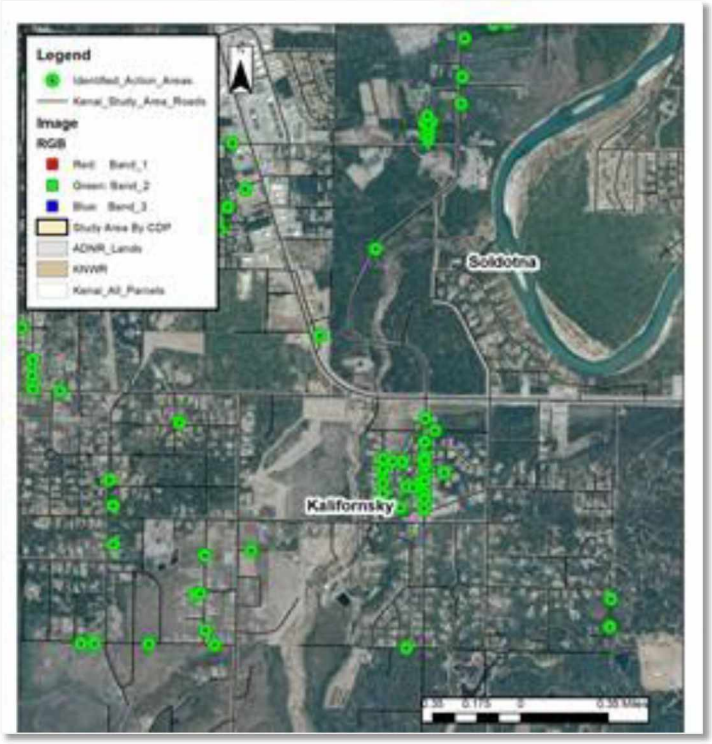


Figure 4. Urban Example Mapping of Community Sprawl with Identified Work Areas.

5.3 Sampling Techniques

I used a nonprobability convenience sampling strategy to acquire data about infrastructure and perceptions (Kumar, 2011, p. 185). The procedure includes the use of predetermined sample size and the use of data that was not created to be used for data evaluation (Kumar, 2011, p. 189). The process for data acquisition included both historical information and data that is currently being considered in transportation processes. Archived documentation was used as the sources of quantitative data collection and included the archived secondary sources to develop information-based analysis (Schiazza, 2013, p. 40). The technique is dependent on the presence or absence of documented comments. Infrastructure documentation also consists of presence and absence, community designations, road areas, and identified changes described in comments.

Data collection relied on archived data that already existed and was available for review. The archived documentation was the source for quantitative data, and archived secondary sources of transportation information also provided historical data. The strategy was also dependent on the presence or absence of documented comments rather than the intent of being positive or negative. Infrastructure documentation consisted of data regarding presence and absence, community designations, road areas, and identified changes described in comments.

The sampling strategy for archived public meetings was based on the idea of obtaining current information from people contributing to discussions. In an effort to collect current qualitative information, comments made at public meetings were documented to determine existing perceptions about transportation development. The purposeful sampling was suitable because of the small number of people who participated in public meetings compared to the overall population, who spoke at public meetings was the result of the entire population having an equal chance to participate in terms of equality in relation to expression (Kumar, 2011, p. 254). Bloomberg & Volpe (2016) argued that data provided by groups of people might be as unique and independent as the places they live. This type of participant-based framework was also described by Silverman (2013) as an inquiry about "what's going on" (p.86) without performing interviews. Silverman believed that the procedure also helps researchers develop independently. The identification of attributes based on perception and raw observations helped capture the unique state of what is going on. As part of the research, the information was used to establish common themes utilizing the comments and identifying each topic expressed to develop attribute themes.

Patton (2015) also discussed this emergent form of exploration method and expressed that too much process and structure can reduce the accuracy of observations and stated, "less is

more" (p. 253). Following the approach of Silverman (2013) and Patton, no identified participants or interview methods were selected for this research. The observations were made without interviews and relied on the initiative of the participants to address a range of issues. Observations were made as raw commentary and documented to determine their contribution to data analysis. These observations represented opinions that people had about planned infrastructure, and those opinions identified attributes about general groups of perceptions. Any resulting infrastructure development may or may not have been performed as a result of opinions expressed by the participants. All potential participants in the research area have a common relationship with transportation use and do not have alternative road access.

Chapter 6

Data Analysis

Figure 1 shows the studied area with its roads based on where transportation infrastructure is available. The review consisted of 15 years of transportation meetings that identified 1,182 instances of roadwork addressed at the Kenai Peninsula Borough RSA Board (Figure 2). These identified work areas were treated individually because they were identified in individual instances at different times. Cases of replication in follow-up questions were omitted from the identified work area list. Other questions about follow-up that included information or demonstrated an evaluation or change of work objectives were counted. These identified comments included all of the Road Service Area Board within the Kenai Peninsula Borough. Eleven percent of the identified work areas were located outside of the defined study area.

6.1 Data

The instances of discussion were also mapped to classify data. Data indicated that work areas were diverse and widespread. The mapping of a work area was directly dependent on the area identified. Often these areas consisted of a significant length of the road, in which case the impacted area consisted of several miles or acres of the affected land. Other representations required assumptions about the identified area because of descriptive terms associated with road identification language. Roads were commonly referred to by name but often excluded notations such as *lane*, *court*, *circle*, and *drive*. The data assembly has some ambiguity for a few common road names that were distinguished without these notations. Other inferences of road names included local references that were not the proper designated names of the roads. For example, *North Road* was the local name of the northern area of the Kenai Spur Highway. There were also

misspellings and typos in the meeting documentation. Considering all of these factors, the identified work areas suggest that the transportation area was most often are identified as an area impacted by the need for construction work and included some exceptions of specific areas that referenced bridges or identified drainage ways.

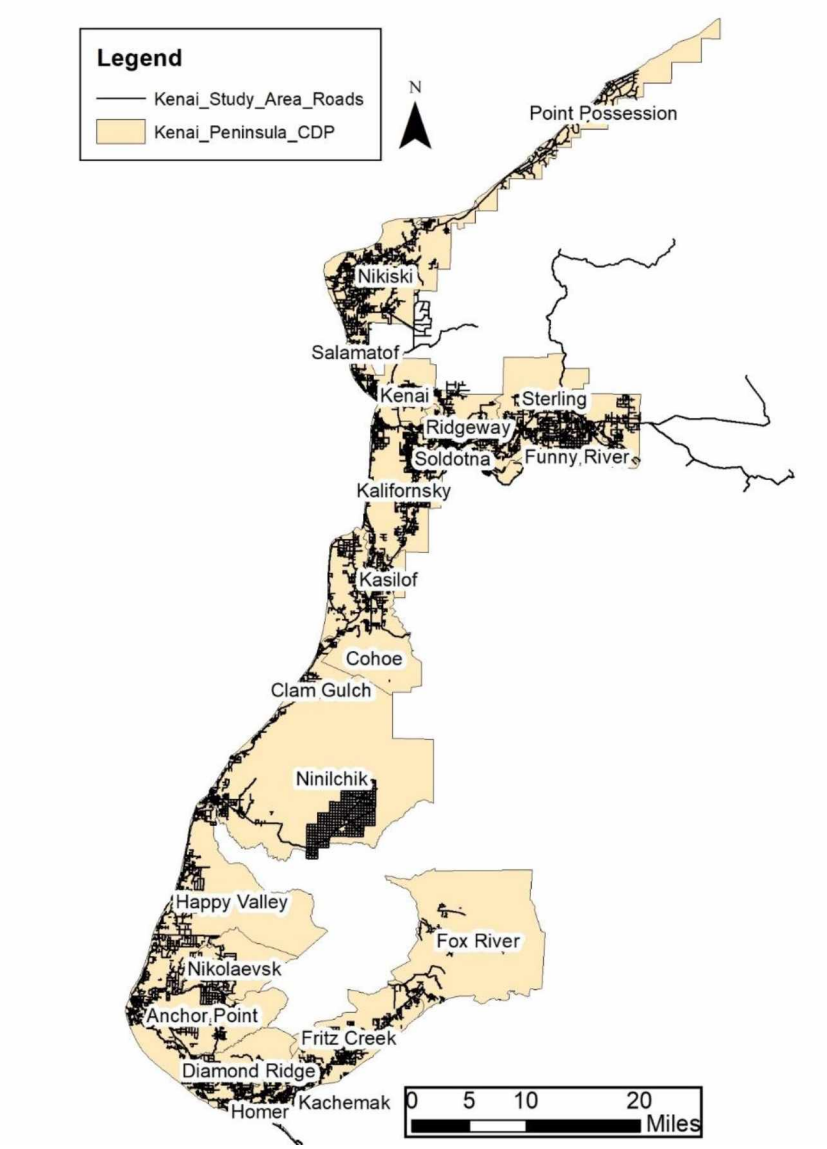


Figure 5. Identified Research Area with Census Designated Place and Roads.

Note. (Kenai Peninsula Borough GIS Division, n.d.)

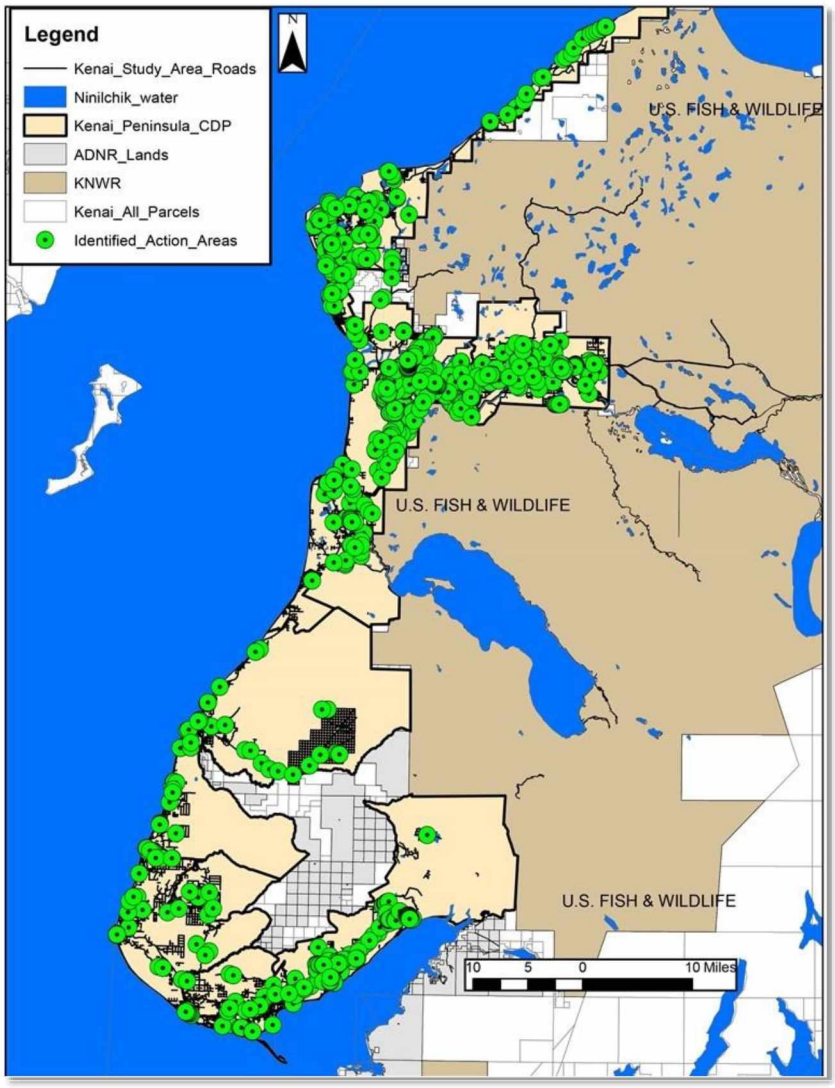


Figure 6. Identified Work Areas With Census Places, Roads, and Work Areas.

Note. (Kenai Peninsula Borough GIS Division, n.d.)

The comments were treated in two separate reviews for 2003–2014 and 2015–2018. In the initial review, I noted changes around 2014–2015 in the documentation process and the number of meetings that occurred per year. It suggested that there would be a change in the public participation around the same time, and I did observe a change in the number of comments per data category, although the categorical types of identified data remained the same.

From 2003 to 2014, there were a total of 122 comments offered by the public at the Kenai Peninsula RSA meetings. Duplicate comments were removed, which left 115 comments provided by individuals from rural and urban areas. The comments indicated seven common themes in each section of the review. The comments are summarized as the presence and absence of data for 2003–2014 in Table 2, for 2015–2018 in Table 3, and for the aggregate of 2003–2018 in Table 4. The data is coded and summarized for 2003–2014 in Table 5, for 2015–2018 in Table 6, and for the aggregate of 2003–2018 in Table 7.

Table 2

Comment Evaluation: Rural Comment Ratio, 2003–2014

Coding	Total comments	Rural	Rural comment ratio per category (%)
Safety	34	16	48
Personal	21	15	71
Basic needs	16	13	81
Development	15	9	60
Economic	13	11	85
Property	11	3	27
Informaiotn Request	5	3	60

Table 3

Comment Evaluation: Rural Comment Ratio, 2015–2018

Coding	Total comments	Rural	Rural comment ratio per category (%)
Development	21	6	29
Property	8	2	25
Safety	7	4	57
Basic needs	6	4	67
Information Request	3	2	67
Economic	3	1	33
Personal	2	2	100

Table 4

Comment Evaluation: Rural Comment Ratio, 2003–2018

Coding	Total comments	Rural	Rural comment ratio per category (%)
Safety	41	20	49
Development	36	15	42
Personal	23	17	74
Basic Needs	22	17	77
Property	19	5	26
Economic	16	12	75
Informaiotn Request	8	5	63

Table 5

Coded Comments by Category: Rural Versus Urban, 2003–2014

	Category comments		Rural comments		
Category	No.	% prevalence	No.	% of category	No. urban comments
Safety	34	29	16	48	18
Personal	21	18	15	71	6
Basic needs	16	14	13	81	3
Development	15	13	9	60	6
Economic	13	11	11	85	2
Property	11	10	3	27	8
Request for information	5	4	3	60	2

6.2 Population Changes

There are standard methods of evaluating populations that include factors such as death and birth rates in the demographic statistical process (State of Alaska Department of Labor and Workforce Development, 2018). In an effort to identify the relationships between transportation and community attrition that supports the suggested migration or shift from rural areas to urban areas, I divided the study area into the Census Designated Place areas that were directly related to population data. Not all years of population estimates were available. Adjustments for population estimates and changes were approximated by identifying the previous available year

and determining the difference to create the estimated population change for each census area. Table 8 shows these data.

Table 6

Coded Comments by Category: Rural Versus Urban, 2015–2018

	Category comments		Rural comments		
Category	No.	% prevalence	No.	% of category	No. urban comments
Development	21	42	6	29	15
Property	8	16	2	25	6
Safety	7	14	4	57	3
Basic needs	6	12	4	67	2
Request for information	3	6	2	67	1
Economic	3	6	1	33	2
Personal	2	4	2	100	0

Table 7

Coded Comments by Category: Rural Versus Urban, 2003–2018

	Category comments		Rural comments		
Category	No.	% prevalence	No.	% of category	No. urban comments
Safety	41	25	20	49	21
Development	36	22	15	42	21
Personal	23	14	17	74	6
Basic needs	22	13	17	77	5
Property	19	12	5	26	14
Economic	16	10	12	75	4
Request for information	8	5	5	63	3

6.3 Documented Perceptions

Noteworthy perceptions from the data review included changes in members of the Kenai Peninsula RSA Board and the assembly of meeting records. These correspond to changes in the leadership positions responsible for making decisions about transportation decisions directly. The data suggested that leadership representation also reflected some special interests, identified by repeated requests for updates and work progress in specific areas. It seemed to be a natural

process, but it may have been the result of public pressure that was not identified in the public comment process.

The changes in meeting documentation also suggested that changes were made in the public meeting process. The documentation included things like changes in the formatting of the documentation and changes in the descriptions of the meeting agenda summaries and in summaries of work performed to address transportation needs. It suggested a change in personnel or perhaps a change in the document process. The reasons for these changes were not noted in the researched documents themselves but were notable in the review.

Table 8

Estimated Population Change: Census-Designated Place

	2002		2006		2009		2012		2015		2017	
CDP	Pop.	Δ	Pop.	Δ	Pop.	Δ	Pop.	Δ	Pop.	Δ	Pop.	Δ
Anchor Point	1842	−3	1803	−39	1772	−31	2007	235	2054	47	2042	−12
Clam Gulch	177	4	165	−12	166	1	200	34	178	−22	177	−1
Cohoe	1223	55	1260	37	1332	72	1384	52	1463	79	1514	51
Diamond Ridge	1130	−672	690	−440	860	170	1210	350	1149	−61	1199	50
Fritz Creek	1757	154	1723	−34	1818	95	1953	135	2043	90	2053	10
Funny River	698	62	729	31	796	67	928	132	943	15	960	17
Happy Valley	497	8	472	−25	561	89	628	67	585	−43	622	37
Homer City 1964	4721	775	5454	733	5551	97	5153	−398	5153	0	5313	160
Kachemak City 1961	419	−12	458	39	430	−28	467	37	483	16	505	22
Kalifornsky	6243	397	6914	671	7495	581	8179	684	8534	355	8564	30
Kasilof	508	37	547	39	536	−11	558	22	560	2	561	1
Kenai City 1960	7166	224	6864	−302	7115	251	7144	29	7229	85	7038	−191
Nikiski	4409	82	4179	−230	4465	286	4623	158	4553	−70	4605	52
Nikolaevsk	314	−31	297	−17	315	18	312	−3	276	−36	311	35
Ninilchik	779	7	784	5	824	40	842	18	849	7	851	2
Ridgeway	1943	11	1961	18	2050	89	2071	21	2205	134	2189	−16
Salamatof	940	−14	906	−34	855	−51	1133	278	1163	30	1129	−34
Seldovia City 1945	308	22	220	−88	241	21	242	1	226	−16	216	−10
Seldovia Village	148	4	159	11	166	7	159	−7	169	10	180	11
Soldotna City 1967	3944	185	3807	−137	4021	214	4299	278	4319	20	4333	14
Sterling	4905	200	5036	131	5348	312	5690	342	5992	302	6075	83

Note. Estimated Population (Pop.) and Change (Δ) by Census-Designated Place. From the Department of Labor and Workforce Development Research and Analysis (Section), by the State of Alaska Department of Labor and Workforce Development, 2018, retrieved from http://live.laborstats.alaska.gov/pop/popestpub.cfm.

Chapter 7

Results

The results of the research established a method to identify relationships between qualitative information provided by the public and a way to measure relevance related to transportation development. The results indicated variances in prioritization and ranking based on the size of the study area and the length of time associated with transportation infrastructure efforts included in the evaluation. The data also indicated that there was a spatial and temporal relationship between comments that expressed qualitative data and transportation work efforts. I identified 1,182 identified work areas and 159 public comments over a 15-year period that demonstrated rural and urban comments present a similar number of qualitative observations. The rural and urban data presented the same coded attribute categories and displayed different rankings. The changes in ranking suggest that the needs and priorities are slightly different. Rural comments also prioritized safety as the most prevalent concerns expressed in public meetings, and urban comments demonstrated an equal focus on safety and development.

7.1 Qualitative Observations

Rural and urban comments demonstrated a similar number of qualitative observations. The different sets of values represented the same categories and displayed slightly different prioritization. Tables 2 through 7 represent the data based on rural numbers. The priorities determined by urban commenters demonstrated an equal value in safety concerns and higher values in development and property concerns that were expressed in public meetings. The observation supports the idea of community priorities and identification, as noted by Keeney (2015), where the availability of services contributes to the reasons why people live in rural and

urban environments. Wiszniak (2014) also described the relationship between community growth and transportation had a significant influence on the development of the community. Each of the coded results supports interest in transportation planning and development in the community, as described by Wiszniak. The relationship demonstrates that priorities are similar, where rural comments clearly identified safety as the greatest priority, and the urban environment equally shared interests about safety and development.

The hypothesized attributes included expectations of community priorities, sustainability, development frameworks, population, planning, and an expression of technical capacity could be identified. The hypothesis predicted that these results would also support and express the humanitarian aspects of needs. It proved to be partially true, with identification of attributes indicating community priorities, development, and communication efforts related to related public based planning efforts. The inclusion of all aspects of transportation efforts exhibited a strong divide between different agencies, tribes, and private parties and identified as partially false because the process is not inclusive. I did not identify the hypothesis components that included sustainability, population, and technical capacity in comments presented by the public. The following sections summarize the defined attributes.

7.2 Rural

Rural comments also prioritized safety as the most prevalent concerns expressed in public meetings. The data presented two secondary priorities that had the same number of results addressing personal issues and basic needs. The finding supports the rural ideas expressed by Bista (1974) as well as the grassroots efforts expressed by Cook Inlet Keeper (2018b), in the idea of choices about lifestyles chosen by people to meet their own idea of personal satisfaction. The concept also aligns with the typical rural lifestyles and identification expressed by Keeney

(2015), where the community is defined by the activities that take place in the area. Keeney did not explicitly state that wants to control how basic needs and personal perception in an area were a type of self-identification. Still, the data suggest that this is a similar idea expressed in rural environments on the Kenai Peninsula.

7.3 Rural and Urban

Rural and urban participation was observed throughout the data documented by the Kenai Peninsula Borough RSA process. Rural participation over the 15-year period outweighed urban participation by 10%. The results presented far less inequity than expected. The attributes identified included *safety, development, personal interests, basic needs, property issues, economic changes, and requests for information* and were consistent between the two groups. The rural and urban data characteristics presented the same attribute categories, and the different ranking suggests that the needs and priorities are slightly different. The levels of participation are depended on the total number of participants in the public process. The population of the Kenai Peninsula for the 15 years studied was stable, with a growth rate of 12% (State of Alaska Department of Labor and Workforce Development, 2018). It may be representative of a slight shift for rural to urban environments but does not represent a significant growth curve. It can also be related to the lack of new transportation development. The ratio of urban population to rural population was approximately 2.5 urban residents to 1 rural resident (State of Alaska Department of Labor and Workforce Development, 2018). The ratio, combined with the disparity in participation rates, demonstrates a slightly more significant effort from rural residents to engage in a public process to promote change.

The number of identified road workplaces was not significantly different between urban clusters and rural communities. The exception was the community of Clam Gulch, which neither provided public comments nor received any identified work from the Kenai Peninsula Borough.

7.4 Safety

The review of the 2003–2018 transportation documents developed for the Kenai Peninsula Borough RSA Board indicated that the most frequently addressed topic was safety, which represented 25% of the total comments. Safety issues included comments regarding road signs, emergency services access, road surface and width, dust control, and maintenance issues that created safety concerns (Kenai Peninsula Borough Road Service Area Board, 2003 - 2018). The discussions regarding road safety had also shifted during the previous decade. In 2005, the Kenai Peninsula Borough RSA Board informed residents that "the owners could purchase the signs" (p. 3) because having the road inspectors manage them would take "too much time" (Kenai Peninsula Borough Road Service Area Board, 2005). This position progressed to a statement from the Kenai Peninsula Borough Road Service Area Board (2013) that signs would be "compliant" (p. 4) with the Alaska Sign and Design Specifications by 2013.

7.5 Transportation Development

Development was the subject of 22% of the comments. These comments included discussions about road design standards, requests for road improvements, and even requests to change the Kenai Peninsula Borough Code to make regulatory frameworks more manageable for landowners (Kenai Peninsula Borough, 2012).

7.6 Personal Interests

The second most popular category, corresponding to 23% of the comments, was made up of things that people wanted to change based on personal preferences such as the ability to access both personal and recreation areas from the road system. Personal interests suggested that individuals perceived the quality of their life focused on where they lived. Comments addressing the recreation opportunities on the Kenai Peninsula suggested that people residing near these recreation sites had grievances about recreational access for the public. It does not seem to have been an actual transportation issue, but many comments addressed methods to reduce or eliminate recreation activities because of access as a transportation issue that encumbered access points. Comments even included requests that the borough would not support road planning efforts to reduce the recreational access on the Kenai Peninsula (Kenai Peninsula Borough, 2011). Other personal issues included having places to walk along roadways as a locally supported recreational activity. These comments included both recreational opportunities and access to property and even addressed areas where the roadways were not developed to standard or even passable. An example of personal interests is supported in the comment from the October 2015 RSA meeting, where an attendee requested road work to support social interactions "that is a necessity for seniors." (Kenai Peninsula Borough, 2015)

7.7 Basic Needs

The ability to access places is a fundamental part of what is expected when a road is built; it is a basic need. Basic needs were the subject of 13% of the comments. Common issues of roadways experiencing seasonal failures or problems related to inadequate construction methods ranked fourth in the commentary. Documented comments suggested that there was a need to have basic sustainable infrastructure established on the Kenai Peninsula, especially on roads that

were maintained through government funding. A majority of comments included deteriorating conditions during the spring thaw conditions, referred to as breakup or issues with snow removal and storage areas that contributed to sustainable road infrastructure where basic needs were not being met.

7.8 Property Issues

Property issues were addressed by 12% of the reviewed comments. The data included comments about changes in easements and the establishment of throughways that created issues for property owners or established conditions that they did not want. Other comments focused on transportation development and changes that had created flooding issues on the roadway or from roadwork that created flooding on other neighboring properties (Kenai Peninsula Borough, 2008). The flooding associated with the road system seemed to be the result of a deficiency in planning or engineering efforts that encumbered property adjacent to road easements. Other issues, such as the aesthetics of land and the value of the environment, increased in recent years. For example, comments desiring road designs with fewer impacts on trees in the area, which suggests a shift from concerns about road access to comments associated with increased concerns about appearance.

7.9 Economic Changes

Discussions about costs, taxes, and assurances of standards that attribute to costs comprised 10% of the comments. This group of comments included several references to the costs of capital projects and justifications about economic development. The theme of economics ranged over a wide range of subjects from individuals not being able to obtain a bond to develop their own property (Kenai Peninsula Borough, 2007b), to road inspectors not working weekends limiting production rates and increasing costs of construction projects (Kenai Peninsula Borough,

2010). These comments reflect expressions about economic effects in transportation applications and decision processes and also support the public desire to obtain public information so the public would have a voice in the process.

7.10 Requests for Information

The final category of comments were requests for information, which made up 5% of the documented data. The requests consisted of questions about how transportation processes are decided, how road construction standards used, and how people look for information about how the transportation decision process works (Kenai Peninsula Borough, 2007a).

The data demonstrated that it was a temporal relationship in the information based on public participation, population, and identified work areas. According to the plotted data and moving average, there was a significant change in the public interest and transportation work every 10–12 years. Public comments declined from 2004 until the next peak in 2013. Similarly, identified work areas peaked in 2008 and appeared to be heading for another increase after 2018. Typical roads are designed with a lifetime longer than five years. The results suggest that public interest peaks and the transportation infrastructure response to the public input is then delayed by 4 to 5 years.

7.11 Work Areas

The identification of work areas that were addressed in the public meeting process displayed a consistent and diverse range of identified areas that consisted of both rural and urban areas. Figure 6 provides the mapping of the areas identified associated with the road system that exists in the area. The mapping demonstrates that the majority of the road system received some type of work over fifteen years. This data also supports the slow development of transportation infrastructure. Annual assemblies of road work areas were too small to represent the work

performed and made it appear to be sporadic. Mapping a longer term of work area data represents the 15-year transportation effort on the Kenai Peninsula presented by the Kenai Peninsula Borough. Given enough time, the mapping data shows that both rural and urban areas receive transportation work in an inclusive distribution.

Chapter 8

Conclusions

Tillotson (2013) suggested that most transportation works do not represent the qualitative aspects of transportation and that there is an imbalance between rural and urban communities on the Kenai Peninsula. My results indicate that the occurrence and the relationships between transportation and community members are quite similar for rural and urban communities. Of all the comments analyzed, 45% were urban, and 55% were rural. Grassroots organizations, such as Cook Inlet Keeper (2018b), comprised of both rural and urban people and expressed that they felt that they had not been heard. The results suggest that this could be indicative of the statements made by Gottstein (2005) in having special interests focusing on specific groups of people. The primary intent of the research was to determine if attributes could be identified and determine if they shared common traits and required nonspecific groups of commenters.

8.1 Discussion

The review utilized an emergent method that focused on attribute identification and then an evaluation of consistency to identify commonalities. I also found common traits and temporal and spatial variations in the relationships between traits and transportation work. The identified traits were termed attributes and consisted of safety, personal interests, basic needs, property issues, economic changes, requests for information, economic changes, and work areas in terms of rural and urban expressions. Changes in the evaluation timeframe or the evaluation of an area maintain the same attributes, but the priorities assigned to the attributes change. The information suggests that my chosen method is valid when applied to a fixed area or time frame. Mixing time frames and areas or cross-referencing other transportation systems, such as with federal or tribal

roads, may affect the consistency of the review process because of the way data is collected and documented.

The data collected suggests that there are additional relationships between community expressions and the results of transportation work. Examples would include the evaluation of the ranking priority of an identified attribute that changes priority level over time. Data such a this suggests that the temporal relationship in the data would be adequate grounds for further study because of the timing of the comments and when the transportation work happened.

The study also identified qualitative human aspects that could be evaluated in relative terms to identify common traits. These traits can be assigned to common attributes and provide measurable data with reasonable accuracy and precision based on the spatial and temporal frameworks. It is only reasonable to assume that these traits may be different in different geographical locations that present heterogeneous needs and desires. In this case, the Kenai Peninsula Borough's public has the opportunity to comment on and ask for things creating a written record of events and input. However, there are other cases where there is no record of what the public asked for or what work was performed to identify what the public desired.

The troublesome aspect of transportation development that makes the evaluation of its methods problematic is the relationship between population, expressions, and infrastructure. Testing this idea in research between qualitative and quantitative relationships provides a reasonable way to measure change, has the potential to promote data collection, and provides information about the value of the establishment of archiving comments and records with more public authorities. The time frames established with the temporal relationship exists as a static framework. Further exploration of the relationships would most likely demonstrate other measurable values.

8.2 Potential for Change

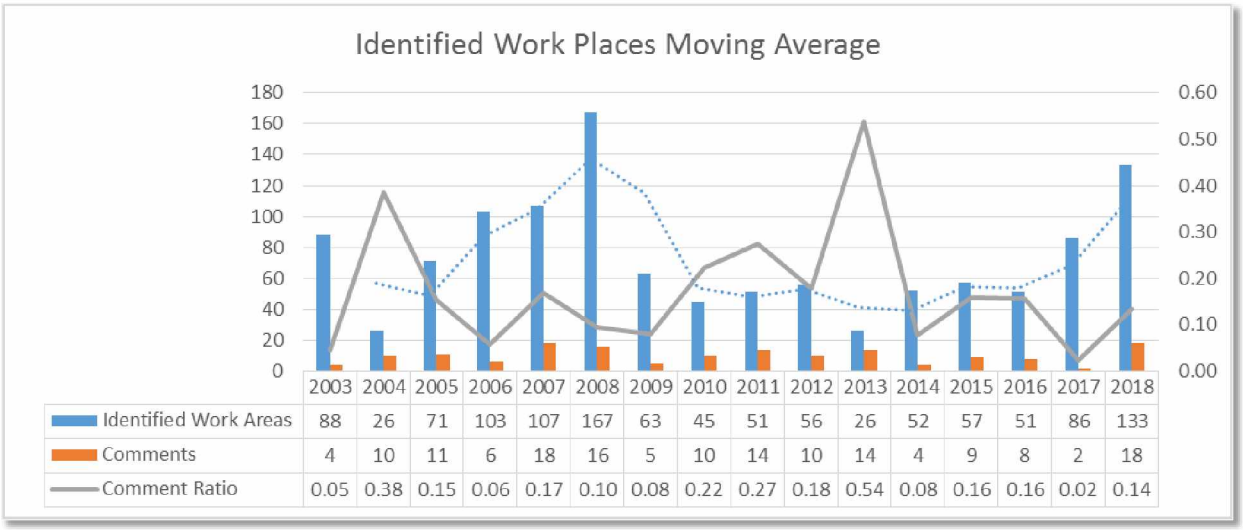
The data reflected a nearly equal contribution between rural and urban residents at the public meetings. The distances associated with rural communities with established road systems, sharing of services, and the notable dependence on registered vehicles on the Kenai Peninsula all suggest implications for the evaluation of transportation infrastructure and the methods of transportation used in these communities. Data suggests that this is true of both rural and urban areas. The concept of transportation includes more than roads; it also includes receiving goods, personal investments, and engaging in commerce that provides for the needs of the community. Broader implications discussed by Hunsinger (2007), also spoke about how population shifts from rural to urban areas may occur in the future. Today in Alaska, a community simply cannot survive without access to fuel for heat, food to eat, and commerce. The research concludes that both rural and urban communities express their views when given an opportunity to do so.

Incorporating qualitative values in this research considered that the old ways of subsistence lifestyles that utilize resources to support the community have changed on the Kenai Peninsula. Incorporating modern community needs such as healthcare connections into the idea of the community needs, such as transportation infrastructure, may contribute to sustainability but also has the potential to add life-changing impacts that may or may not be desired by a community. Even the Kenai Peninsula expressed comments on not supporting transportation infrastructure because of the issues created by people outside of the community. Berman (n.d.) claimed that limiting modes of transportation also controls these types of relationships that the community has. Berman made this conclusion based on the routes that are available between communities and noted that the combinations that allow for limited interactions between them are more pronounced in the Alaska Arctic. This research indicates that transportation is

extensively utilized and establishes relationships with other communities based on the resident information detailed in the commentary provided by the RSA Board process.

8.3 Sustainability

Transportation sustainability was represented in the data explored in this study. Sustainable frameworks were represented in terms of public interest, time, and project status. According to Figure 7, increased public interest occurs from both rural and urban environments, and its effort pattern indicates that it may act as a catalyst for change. The information is supported by approximately 4–5 years; after the qualitative data is shared, there is a notable increase in work activity. This cycle appears to span a five and 10-year period and suggests that transportation infrastructure is supported consistently over long intervals than expected. This relationship was not readily apparent when reviewing the documents and is best communicated visually by the graph.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Identified Work Areas	88	26	71	103	107	167	63	45	51	56	26	52	57	51	86	133
Comments	4	10	11	6	18	16	5	10	14	10	14	4	9	8	2	18
Comment Ratio	0.05	0.38	0.15	0.06	0.17	0.10	0.08	0.22	0.27	0.18	0.54	0.08	0.16	0.16	0.02	0.14

Figure 7. 2003–2018 Identified Workplaces and Comments.

The graphic representation captures each part of the process and demonstrates data over a 15 year period. The cyclic rate expresses a ten-year increase in public commenting and public

interest and discussion, followed by a significant increase in transportation work. The pattern may be related to public pressure or funding availability. Another relationship may be tied to annual funding availability, but funding evaluation was not part of the research. Transportation acts in 2015 provided the State of Alaska with $483,900,000 to address transportation issues (Brehmer, 2015). New legislation was also introduced with a 5-year lifecycle that would increase the federal funding provided to the state by $25,000,000 in 2016 through the Fast Act (Brehmer, 2015). The Fast Act provided for five years of transportation funding and was supposed to increase federal funding for the period. Information such as this also offers financial supporting data for the ten-year cyclic period noted in the graphed data. While some communities would like to see transportation infrastructure grow faster or be addressed more quickly, the data support both rates of public interest and infrastructure development.

8.4 Recommendations

The purpose of this project was to identify and evaluate the relationships between transportation infrastructure and communities that are linked by it. The broad scope was needed to allow the research to present and identify different measurable aspects that would support the initial goals. This topic could have the scope narrowed to address specific needs or commerce based issues primarily because of the available data created and archived by the Kenai Peninsula Borough. Recommendations for future research include research to identify other contributing mechanisms for transportation development and determine if similar relationships exist in other places.

This research was undertaken in South Central Alaska and presented a ratio of urban and rural participation that was nearly equal. Other areas would also benefit from the method used in this study to identify the expression of the local population and measure the input. Data can be

used to obtain ideas of public needs and support or to identify deficiencies in the existing infrastructure for long term planning efforts. In any case, the method provides a method to evaluate qualitative information and assemble measurable values.

The exploration of longer time frames could also offer a more comprehensive refinement of the method. This data set was comprised of 15 years of documentation and suggested the occurrence of a 10-year cycle in the transportation process. It also indicated a ten-year increase in public participation that seems to trigger action. Further research about funding may also help identify or confirm the existence of such a cycle and other contributing factors.

Areas that have experienced significant population change may also benefit from further study. Because significant population change can happen quickly, identifying issues or consistencies in causational relationships would help forecast how changes in transportation could affect communities based on the input components such as public input in a representative study area and time frame. The establishment of rural and urban population identifiers, as seen in the state-designated population clusters, may also need to be established in specific areas to define how communities define area population dynamics.

Further studies should take into account the existence of documentation that captures qualitative information. Throughout this research, documentation has been limited by the organization keeping the records or sponsoring the public process. Research in other areas may produce more obstacles in data acquisitions and may need to use interview methods to acquire data.

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Appendices

Appendix A

Comment Summaries

4-2004	Urban	Area is dangerous due to sight issues and grade, adding that in her opinion, the stop signs are in the wrong direction.
4-2004	Urban	Dust control palliatives She added that it's the only area of Spruce Ave that doesn't get calcium chloride,
8-2005	Rural	Speed limit requests.
8-2005	Urban	Road line of sight.
8-2005	Urban	Public petitions to stop the through road were ignored.
6-2005	Urban	Speed limit signs - told they would be put up.
8-2006	Urban	Thank you Roads Department for installing street signs in the subdivision.
2-2006	Rural	Safety he states the road needs to be widened so cars can pass.
5-2007	Rural	He wants the department to be able to access the lake off of Fairway Avenue and Cohoe Lake Drive to fill this tanker. The fire chief has a 500-gallon per minute portable pump that we can use to get water out of the lake. The fire chief is to come down next week and look at this option. The road will need to be widened, because it's only a one-lane road.
5-2007	Urban	There was a small repair done on Fairway a couple of weeks ago that included adding sand to the road. Small cars are now having difficulty crossing through the sand. He cannot drive his motorcycle through the sand, and it's unsafe.
5-2007	Urban	Director Davis stated residents in the problem subdivision have signed a petition supporting a 20 mph. The RSA has a sign policy in place requiring that 70% of the parcels abutting the road approve a speed limit sign other than statutory speed limits. The residents have met the RSA policy by receiving 75% approval of the 32 residents in this Subdivision. This road has been recently extended to connect to another subdivision, which has increased through traffic.
3-2007	Urban	Would like to have the road grade lowered so a stop sign can be seen after being installed. The traffic is going too fast through the intersection. There are many children that live in the neighborhood.

3-2007	Urban	The dust created from vehicle traffic on this road is causing health problems for some of the residents on Spruce Street. The boat trailer traffic drives this road at a high speed ignoring the speed limit. He would like this area patrolled by more police.
2-2007	Urban	Volunteers for Emergency Medical Response Teams live on this road and request maintenance so they can have better access.
6-2008	Rural	Last 22 years only minor work, including adding gravel, has been done to upgrade this road. Mud and typar are now showing on the road surface making the road impassible. There are 135 residents in Voznesenka that KPB collects road taxes from and they would like to see the road improved.
6-2008	Rural	Becoming unsafe because of the amount of vehicles that use it with the poor road condition. The road needs to be upgraded to road standard specifications.
6-2008	Rural	This road has major sink holes and has poor road material. Emergency vehicles, teachers and residents cannot get thru during break-up.
6-2008	Rural	Upgraded with gravel and be built to standards to make it safe. Emergency vehicles have issues getting through the Willow Brook Subdivision at break-up.
3-2008	Urban	Fire Chief, requests that new roads 150' or longer with no thru access have a 96' diameter cul-de-sac. This is what is recommended to allow emergency vehicles to tum around according the 2006 International Fire Code
10-2009	Urban	25 mph speed limit sign installed on Keystone Drive
9-2010	Rural	Is a safety issue with the school bus stop on the comer of Woods Drive and Ciechanski Road. It would be safer for traffic and students if the bus could travel down Woods Drive and tum at Lori Jo Street
6-2010	Rural	Board to upgrade Basargin Road because road is narrow and logs are appearing on road. There is a major need to for upgrade on the dangerous comer, also known as the beaver pond.
4-2010	Rural	Some roads are too narrow to allow for two passing lanes during summer with trees growing in ditch line.
7-2011	Rural	Mr. Haggerty said there is poor visibility for vehicles entering the Sterling Highway from the intersection at Walter Thomas Road. Vehicles are pulling out fast to enter Sterling Highway leaving big holes on the approach.

4-2011	Rural	Martin spoke on behalf of KESA (Kachemak Emergency Service Area) residents requesting the borough maintain Ruth Way located off Diamond Ridge in Homer. KESA' s emergency facility is located on Ruth Way which should be maintained by the borough to allow accessibility at all times. Ruth Way is not maintained by the borough even though KESA was informed by the administration it would be.
4-2011	Rural	To improve safety he would like to have aprons constructed on Walter Thomas Road and Green Timbers Road were they intersect Sterling Highway.
11-2012	Rural	Anderson is concerned with narrow shoulders and ditches on Oil Well Road in Ninilchik. Milepost 13 has a steep 1000' deep ditch and he would like to see a guardrail along the comer.
11-2012	Rural	Basargin complained the deteriorated culvert is eroding a portion of Basargin Road causing the road to narrow. Logs are appearing on the road surface because the road was not built to handle the large trucks hauling gravel. The village residents complain of the dangerous driving conditions.
8-2012	Urban	Drive from 10 miles per hour (mph) to 25 mph. He is concerned about the welfare of children in the neighborhood riding their bikes, walking animals, increased traffic to the boat launch and the amount of dust
8-2012	Urban	Drive. There is poor visibility turning the corner because of overhanging trees. He is concerned about his children riding their bikes in thru the neighborhood. He has limited his children to staying in the driveway because of lack of sidewalks.
8-2012	Rural	About the parking problem creating a safety hazard ** archive does not capture comments – mine creates a dangerous situation because it limits access for emergency vehicles. It's more of an issue when there are events.
4-2012	Urban	Is the road maintenance contractor in the Seward. Mr. Dieckgraeff said the roads are becoming narrow and the berms are high making it difficult for passing vehicles. Snow pushed into the road by residents has created more of a problem for snow storage
8-2013	Rural	Overflow from a private boat launch and public accessing Torpedo Lake trail are parking their vehicles on both sides of Kenai Keys Road from top of the hill to ADL Way creating a safety hazard.
11-2014	Rural	Mr. Jones is a volunteer for the Kachemak Emergency Service Area. Morrison Drive and Neolan Drive are in condition bad enough emergency vehicles cannot get through at times.

6-2014	Urban	The road is narrow leaving nowhere for the grader to push snow. A property owner has stacked up brush on both sides on a section of Pinnacle View Road reducing the width to one lane. Pinnacle View Road is heavily traveled during the summer from traffic entering AK State Park property that provides access to the beach.
7-2003	Urban	Land ownership aligning roadway to become a contiguous road.
5-2003	Urban	Gravel bars in the river is creating flooding across the roads and requested that something be done.
8-2005	Urban	Creating through roads has increased traffic and speed of vehicles effecting families with children.
7-2008	Urban	Since this road has been raised, flooding has occurred on private property. Floodwater freezes making the property unusable. He would like to know the engineering process that was used to determine that the road needed to be raised. Would like to know what permitting the RSA had to add fill material to the roadbed.
10-2009	Rural	Requests an exception to road standards for a tum-around. It is a 22' road that has substantially met the requirements.
9-2009	Urban	The Borough came in three years ago and raised Eddy Lane, which has now caused flooding in subdivision. She requests subdivision roads need culverts.
4-2009	Rural	She resides on Even Lane and is afraid the water on the road will drain into her garage. Even Lane is a dangerous impassible road for emergency vehicles to travel.
4-2010	Rural	Presented a video that included pictures of Beach Drive flooding. He would like to know what work is proposed to fix the flooding problem. His concern with elevating road without proper drainage could result in flooding residential homes.
6-2011	Urban	Traylor would like the borough to fix Eddy Lane to eliminate it from flooding.
4-2013	Urban	Removing debris under bridges and sediment maintenance plan. Streambeds have build-up of gravel disturbing water flow, which creates flooding in subdivisions.
4-2013	Urban	Removal of the sediment will help alleviate flooding adjacent properties, roads, create a catch basin for regular maintenance and support the management of large stream beds loads.

11-2004	Rural	Increased taxes in areas where there are no utilities requesting road maintenance.
9-2004	Rural	Economic development s great but the it burdens the people who live in an area requests better zoning and planning.
2-2004	Urban	Citizen efforts to obtain funding for road project.
9-2007	Rural	The Birds have a 30" ROW dedication and Mr. Tachick stated he would not give ROW dedication because the borough would not give him a tax break.
8-2007	Rural	Iditarod Extension would be built. He also wanted to know who was going to pay for the construction. The RSA should not be maintaining a portion of Iditarod Street where the last three houses are because it's not certified for maintenance. Those homeowners did not want to have the road extended through. Director Davis replied that at the last RSA Board meeting it was voted to establish the extension of on the five-year Capital Improvement Project (CIP) plan.
6-2007	Rural	Mr. Clark has an issue with the financial guarantee because most people are not bondable. He has to work through an engineer who has bonding capability on public projects. He has to pay them to rent their bonding capability just to build his own subdivision roads because he cannot meet the 50% requirement.
6-2007	Rural	Many of the roads built by pioneers have been upgraded at a cost to the Kenai Peninsula Borough. With the new roads being built, he assumed they were being built to standards. His concern is with the passing of the ordinances that the lower end of the market will be shutout. A problem already exists with affordable housing.
5-2007	Rural	They have been paying taxes for this property for twenty years, but have not received services.
3-2007	Urban	Lives since 1989. The commercial dump trucks accessing the gravel pit have tore up the road and he does not want the taxpayers to be responsible for fixing the mess the dump trucks are creating.
9-2008	Rural	A RIAD was considered in this subdivision, but the estimate cost provided by Director Davis was too expensive for the property owners to pay.
2-2008	Rural	RSA deducted $12 per hour from his invoices because he did not remove the berms created in driveways.
10-2012	Rural	Mr. Holly worked as a subcontractor for Glacier Construction on road capital improvement projects, Ruffed Grouse Road and Juel Avenue. He has not received payment for work performed this summer. Other contractors have the same issue with Glacier Construction.

11-2014	Rural	He cannot access his property by vehicle. With tax property owners pay they should have better access to their property.
5-2005	Rural	Request making gravel roads pavement ready.
4-2005	Rural	Make roads pavement ready - Want road paved.
9-2006	Urban	Lack of signage leaving vehicles to use private driveways to turn around in.
6-2007	Urban	The roads that are being constructed in the area are good roads that are built to Borough road standards. There should be more enforcing of the rules and laws enforced instead of making new ones. He does not know of any roads that have been built to standards that have fallen apart. Doesn't understand why the Borough would up the standards, which would make it unaffordable for people to buy lots.
3-2007	Urban	He would like to have Spruce Street be considered in the agreement between the Borough and the State for paving.
1-2007	Urban	Mr. Hamill stated the driveway does not meet road standards, but is being maintained by the RSA and he believes it wrong.
4-2009	Rural	Subdivision when Even Lane was accepted for Borough road maintenance. Even Lane was approved by the engineer when the road was not built to road standards. When residents bought parcels on this subdivision they were told the roads were build to road standards.
8-2010	Rural	Bryers asked what the intent was ditching Log Avenue. Road has never had drainage problems. Now culverts are no longer useful.
6-2010	Urban	There are no culverts on the road, causing properties to flood Lake. It has a dangerous curve and the road is narrow making it difficult to pass a large truck. maintenance contractor in the South region. He has been told by Inspector Mofford he cannot work after 5:00 PM and on weekends. He wants to know who authorized the directive. He was told inspectors were advised by the union to not answer their phone on weeknights and weekends while in contract negations with the union.
2-2010	Rural	White Spruce Avenue has turned into shortcut access route through the main subdivision roads creating a safety hazard.
6-2011	Rural	This would move the road away from her home and avoid conflict with utilities during construction.
8-2012	Rural	Mr. Fassler would like to increase the speed limit to 25 mph. The troopers will enforce the posted speed limit. The 10 mph is against KPB Code 12.02.275 - Basic Rule and Maximum Speed Limits.

		Road in Ninilchik and has a lot of traffic to service a senior citizen center at the end of the road, senior citizen housing, fish charter, marine repair, church and a dentist office.
8-2013	Rural	No Parking" signs. Policy refers to placement of parking signage shall be consistent with the ATM (Alaska Traffic Manual) and Alaska Sign Design Specifications. The ATM, Section.
2-2013	Rural	Director Malone received "No Parking" sign requests for the Kenai Keys Subdivision where the Kenai River can be accessed. There are multiple "No Parking" signs installed now in the subdivision.
2-2013	Rural	The RSA has also received requests for "No Parking" signage on Julia Steik Avenue.
2-2013	Rural	Julia Steik Avenue is across from the Ninilchik Fairgrounds. Cars are parked along the side of the road only during the Ninilchik Fair every summer. There are already numerous signs on both sides of the road.
7- 2013	Urban	Requests for information such as vehicle traffic counts.
8-2004	Rural	Questions about road classifications and how costs ware applied.
7-2004	Rural	Approval of road construction with incomplete road surface.
1-2004	Rural	Bad landownership information form Borough.
8-2007	Urban	Wanted to understand where the Assembly receives their direction pertaining to road issues. Director Davis stated the RSA Board is an advisory board to the administration.
6-2003	Rural	Gravel and culvert installation to improve egress form farm properties.
5-2003	Urban	Claims to private property is a difficult fix emergency vehicle access.
6-2004	Rural	Bike path and biker safety.
6-2005	Rural	Property owners provide ROW and want her road constructed to standard.
5-2005	Rural	Road maintenance requests.
12-2006	Rural	Has horrible conditions during break-up because Increased maintenance needs because of growing community Borough could do a better job preparing for floods.
9-2008	Rural	It's impassible during break-up and Kachemak Bay emergency vehicles-cannot make it thru during an emergency.

8-2008	Urban	The road has not been upgraded nor had any work done but gravel added to the road and she feels it is impassible at many times.
7-2008	Rural	Requests Valley View Road is improved so it will be passable during fall breakup. Mr. Arnold has lived there for 3-5 years. Last spring residents were unable to drive Valley View Road and had to park on Robinson Loop and walk because the road was impassible.
7-2008	Rural	Stated she needed a 4WD vehicle to get thru Valley View Road. She runs a business out of her home and had to cancel visits because the road was impassible this last April and May.
6-2008	Rural	This road has major sink holes and has poor road material. Emergency vehicles, teachers and residents cannot get thru during break-up.
6-2008	Rural	There is only one road in and out of this subdivision creating a lot of traffic and frost boils form at the beginning of the road making it nearly impassible during break-up.
3-2011	Urban	Mr. Giezelmann is asking for a larger culvert on Steelhead Circle. The drainage is freezing across the road creating difficulties for residents to cross.
10-2012	Rural	Stacey Lane is not borough maintained. The road is in bad shape causing trucks to slide down sideways during the winter and not accessible during spring break-up unless on a 4-wheeler. The first 1400' of Stacey Lane, which intersects Nikolaevsk Road, crosses over private property.
6-2013	Rural	Mr. Klawunder is upset the un-paved portion of Wood Drive will not have calcium chloride applied this summer.
1-2013	Rural	Mr. Smith has concerns with citizens pushing snow into the road ways. Snow, especially with a hard pack, is hazardous for the equipment operators while plowing.
9-2014	Rural	James Unrein is asking the board for an exception to road standards so N. Roundtable Drive may be considered for road maintenance.
7-2013	Urban	Nowhere to walk near the roads in the winter months and during breakup 7-2013 urban Speed bump installation and the quality of life - the home owners should determine where speed bumps go.
6-2004	Rural	Signage and stripping on bike paths.

6-2005	Rural	Decommissioning roads been in use since they have lived there for 16 years & decommission roads increase traffic volume in front of homes Disabled children cannot access the school bus stops.
6-2005	Rural	Creating an access for a ROW to a state maintained lake changes the quality of life 9-2006 rural Vandalism to roads form health issues that impair rational thinking.
11-2007	Rural	This parking area, which include drug use, illicit behavior, parties, camping, indecent exposure, and loose animals. He is requesting help from the Borough for additional signage and for the police to protect his property Chairman McLane explained the Borough does not have policing powers - but have decided the current location fits everyone's interests. Board Member Blakeley wants to add a provision in the permit stating that the City of Kenai should be responsible for additional policing and to consider putting up a fence
8-2008	Rural	Mrs. Ritchie has sod that was peeled back on the south side and now the trees are at risk. 8-2008 Her property abuts the driving surface of the road drives Katamar Avenue and is concerned about mud conditions on Browns Drive and Katamar Avenue this year. These roads are constantly driven by older people and they could get stuck in mud. These roads are impassible at times and she would like the roads improved.
9-2010	Urban	He does not want to lose the trees in his yard served as a privacy barrier to his house. He does not want calcium chloride applied to Betty Lou Drive next year. He is concerned the chemicals will run into the river
9-2010	Rural	Stone would like a different location considered for the cluster box installation on Moose Range Drive. She is concerned if located on the comer of her property the traffic would spook her horses.
10-2011	Rural	Mrs. Basargin asked if the Borough would fill the other side of Basargin Road instead of taking part of her property. Basargin Road has no foundation and needs gravel. She has concerns for teachers and residents traveling the road.
10-2011	Rural	Mr. Basargin asked that Basargin Road be upgraded. Poor road condition is causing much wear and tear on their vehicles.
6-2011	Urban	There is also a road blockage problem from vehicles parking that launch boats and fisherman.
4-2011	Rural	For him to access his property he has to use this unmaintained portion of road that crosses private property.

2-2011	Urban	KPB 12.04 gives the Road Service Area the authority to issue situations for parking along a road signed with "No Parking". She would like to have the times removed from the signs and towing enforced.
2-2011	Urban	Mr. Barak owns a cabin on Steelhead Drive. He does not want the KPB to support the plan to develop the neighboring State DNR land to provide parking so visitors can access the Kenai River.
1-2011	Rural	She is asking the Borough to enforce the parking signs along Rapids Avenue and Steelhead Circle. Residents have been threatened by inebriated individuals, driveways blocked, guns drawn by fishermen, fishermen threatening to beat up homeowners, people using drugs next to homes.
1-2011	Rural	He is asking the Borough to help reduce the amount of foot traffic accessed from the Rapids Avenue ROW. River banks are getting damaged from impact of foot traffic and the launching of boats. He asks the Borough enforce the "No Parking" signs and contract with a tow truck company to remove the vehicles that do not comply.
10-2012	Rural	The people at the beginning of the road would like to put in a dock on the lake so they can land their float planes. She would like to know if the borough has regulations that allow this.
8-2013	Rural	No Parking and No Public Access" sign request February 5, 2013. Director Malone drove Vio Road with Richard Cobb to see where to install signs. During the fishing season this summer Road Inspector Hastings monitored the parking along Vio Road. She reported only one car was parked alongside Vio Road.2/1/2015 Mr. Yragui asked the board to provide accounting of material added to roads during the flooding process.
2/1/2015	Rural	"He asked if Widgeon Woods Subdivision was constructed with culvert and ditches and engineered with tax money while the K-Beach residents flooded in 2012 and 2013."
2/1/2015	Rural	It floods every 5 years. Last year flooding created a lake 3' to 4' deep all the way to Poppy Wood. It flooded people's basements and crawl spaces .
2/1/2015	Rural	Community may not support the RIAD now that discovery of the ground water flooding and contaminated the wells in the River Hills Subdivision.
4/1/2015	Rural	Sirrs thanked both for keeping the aspen and birch trees along his property.
4/1/2015	Rural	Lack drainage between seven driveways creating ponds in the ditch.
4/1/2015	Rural	Currently, residents are pumping water.
10/1/2015	Rural	The senior residents suffer from multiple health issues. Dust created by road traffic contributes to their breathing problems.

10/1/2015	Rural	Having social interaction is a necessity for seniors.
10/1/2015	Rural	For the health of the seniors he asks the RSA Board to support paving Aspen Avenue.
2/1/2016	Rural	She would however, like to see a ditch on the north side of Buoy.
3/1/2016	Rural	Also recommended that the Board provide more information to the public regarding the good things the RSA does such as ditching, culverts, road shaping, gravel, etc.
5/1/2016	Rural	"They have lived there for 40+ years, he has only seen the borough put eight loads of gravel on this road in that time. The borough has pushed gravel to the sides which have helped widen it but has left it in bad shape with lots of pot-holes."
5/1/2016	Rural	The road is at the same level as the tundra and the rain/weather creates one foot pot-holes within minutes.
10/1/2016	Rural	They have kids that need to get to school and emergency vehicles need to be able to get down these roads.
10/1/2016	Rural	Had a substantial increase in criminal activity on their property and in the surrounding neighborhoods.
10/1/2016	Rural	They believe this is a public right and the public by past usage of requisite period of time has ripened into a prescriptive easement and basically has become a public way.
11/1/2016	Rural	Graded and sanded before 7:00 am. On school days. The school kids arrive at school around that time and it would be very nice to have that done before they start showing up for school.
11/1/2016	Rural	One icy day, a few weeks ago he explains, there were several vehicles off in the ditch because of icy road conditions and one in particular had six kids in it and ended up in the ditch upside down on the hood of the truck.
4/1/2017	Rural	The residents would like to see the project halted or modified and that they are okay with some road improvements as long as we do not create any ditches or cut down trees.
6/1/2017	Rural	Opposition to the CIP project and some of the largest concerns are the removal of trees that are currently a dust buffer and noise barrier

3/1/2018	Rural	Debbie Sandefer of Kasilof, Alaska; addresses the board regarding her encroachment permit dated January 26, 2018. Roads that are affected by this permit include Tawney Street, Collins Drive and Havityer Way. She expresses her view of the safety coded fencing that borders these properties/roads has been there for over 25 years and she feels it is very safe.
5/1/2018	Urban	A few changes. He explains that the state is trying to be proactive with the shrinking budget and also in promoting joint efficiencies between the State and the Borough. In the attempt to find logical efficiencies that would benefit the Kenai Peninsula Borough and the State of Alaska DOT, they would like to propose the trade of ownership and maintenance of the roads listed below.
5/1/2018	Urban	"Miron Basargin, PO Box 829, Homer, AK: States that last year East End Road was torn apart by DOT and it was a good road. He does not understand why money was spent on a good road like East End Road rather than putting money on roads that really need it.
5/1/2018	Urban	Homer, AK: States that there is a maintenance problem with Basargin Road. They have to call 365 days a year for maintenance, especially in the winter with removing the slush. He encourages the board and staff to come drive this road today to be able to see just how bad it really is. It is bad enough that kids riding bikes run into potholes and break their wrists.
5/1/2018	Rural	Road. This road is not currently, and was never built, to borough road standards.
5/1/2018	Urban	Dukayo Basargin, PO Box 2395, Homer, AK: States that she also drives Basargin Road with her children and has been stuck many times. There are bears and wildlife on the road and her husband is away fishing. She gets flat tires and there are logs sticking out of the road.
5/1/2018	Urban	Ludmila Basargin, PO Box 2395, Homer, AK: States that at times in the Spring Basargin Road gets really horrible it makes her bike tires fall off.
5/1/2018	Urban	PO Box 2395, Homer, AK: Basargin Road is in really bad shape and damages your car when you drive on it.
5/1/2018	Urban	O'Toole, Aviator Drive, Soldotna, AK: Regarding the recent attention to the bypass around the proposed plant area out in Nikiski, he would like to see Soldotna and Kenai communities focus on traffic growth that will happen.
6/1/2018	Urban	Upgrade. They plan on submitting an application for road maintenance later this summer once upgrades are complete.

6/1/2018	Urban	"41095 Dorothy Drive, Homer, AK: he states that he is the President of Gruening Vista West Home Owners Association and that he along with several other home/lot owners, would like to formally request a portion of Dorothy Drive to be decertified for road maintenance from east end of lot 29 to the traffic circle at the east end of lot 34B (maps provided in packet) and privatize this section of the road.
6/1/2018	Urban	"41188 Dorothy Drive, Homer, AK: he acts as the property manager for all properties owned by the Spotty Merle, LLC. He is the family chef and the nanny for the families five children. His concern is mainly the safety of his clients and the flow of traffic that seems to be increasing."
6/1/2018	Urban	Ross, 41090 Dorothy Drive, Homer, AK: he's lived in Alaska since 1982, he and his wife have owned their property in the Gruening Vista area since 1992. Mr. Koskovich and he have been there the longest and they are happy that Mr. Brown purchased all the vacant properties in the proposed area. They are in full support of conserving all the land at the end of the road as they were afraid it would be developed into a large subdivision someday. He is a commercial fisherman and not there for several months at a time and it's concerning with the threat of criminals etc. in this area and now with Mr. Brown purchasing property it is very noticeable that the traffic has increased. Decertifying this portion of Dorothy Drive will be "a win, win for the entire neighborhood."
8/1/2018	Urban	Regarding Skyline Drive. He stated the road conditions are falling apart, and has become a one lane road and dangerous for residents to use.
8/1/2018	Rural	"that River Quest Subdivision will be applying for road maintenance this year on the first quarter mile of Porter Road, starting at Ciechanski Road down to the River Bend entrance. River Quest has been maintaining these roads for many years and stated that the road conditions have held up over the years. They have recently received a 60-foot right-of-way from the state. He believes that the borough should take over maintenance."
9/1/2018	Urban	Kilcher, Homer, Alaska, representing Kilcher Family Trust: They are not applying for borough maintenance on this road at this time but they are requesting a waiver to the RSA Road Standards as they build and work on upgrading this road and requesting permission to work in the borough's right-of-way. Parts of this road are on a section line and other parts are not, it zig zags on and off the section line and called Guffer's Road. It is also known as Kilcher Road to locals and has been there since 1948. The borough plat map shows a 60' dedicated right-of-way and dedicated maintenance.

9/1/2018	Rural	White, Voznesenka Loop Road, Homer: He thanks the board for their service and explains that over the last 30 years they've been working on upgrading the roads in that area and hundreds of thousands of dollars on about three and a half miles of road and the borough has taken over about three miles and they are applying for road maintenance on the rest of the road. Their main objective is to create a safe community for all.
11/1/2018	Rural	Mr. Wiley explains the need for qualified road maintenance operators because over the years a lot of the nice gravel that should be on the top layer of the roads has been pushed into the ditches.

Appendix B

Identified Work Areas

Table B1

Identified Work Areas, 2003–2014

Count	Road Projects Identified for Construction	Discussed
1	Old Exit Glacier Road	Mar-03
2	Grayling	Mar-03
3	North Boundary Street	Apr-03
4	Boundary Street	Apr-03
5	Community College Road	Apr-03
6	Edgington Road	Apr-03
7	Silver Salmon Creek	Apr-03
8	Dust control	Jun-19
9	Woods Drive	Jun-03
10	Stoney Creek Avenue	Jun-03
11	Nautical Avenue	Jun-03
12	Speed Bump/Hump Program	Jul-03
13	Basargin Road	Jul-03
14	Lovers Loop	Jul-03
15	Card Road	Jul-03
16	Lepus Street	Jul-03
17	Frostland Street	Jul-03
18	LaCrosss Way	Jul-03
19	My Drive	Jul-03
20	Nikiski Emergency Escape Route	Aug-03
21	K-Beach Road up to Highcrest	Aug-03
22	Bluff Road	Sep-03
23	Keystone Drive Group	Oct-03
24	Killey River Circle	Oct-03
25	Rolling Meadows Court 675 ft	Oct-03
26	Bonnie Avenue 1330 ft	Oct-03
27	Rolling Meadows Road 3860 ft	Oct-03
28	Mac Lamore Circle 1000 ft	Oct-03
29	Shady Drive 242 ft	Oct-03
30	Rozak Avenue 460 ft	Oct-03
31	Kazor Circle 350 ft	Oct-03
32	Elemar Circle 300 ft	Oct-03
33	Whitlock Avenue 3,250 ft	Oct-03
34	Raintree Drive 1,000 ft	Oct-03
35	Vanderberg Drive 825 ft	Oct-03
36	Westbrook Drive 1,600 ft	Oct-03

Count	Road Projects Identified for Construction	Discussed
37	Ryan Creek Circle 400 ft	Oct-03
38	Slikok Creek Drive 1010 ft	Oct-03
39	Frances Helen Avenue 1,430 ft	Oct-03
40	Lawrence Court 600 ft	Oct-03
41	Stinson Circle 550 ft	Oct-03
42	Killey River Circle 361 ft	Oct-03
43	Chieslak Ln 975 ft	Oct-03
44	Southbend Court 650 ft	Oct-03
45	Winridge Avenue 800 ft	Oct-03
46	Winridge Court 600 ft	Oct-03
47	Wispen Avenue 450 ft C6;	Oct-03
48	Grant Avenue 1,700 ft	Oct-03
49	Bear Chase Circle	Oct-03
50	View Court roads	Oct-03
51	Spruce Creek Bridge	Oct-03
52	Deleted	Nov-03
53	Spruce Creek Bridge (Old Mill Subd)	Nov-03
54	Palmer Street 2,925’	Nov-03
55	Crossman Road/Star Road 3,550’	Nov-03
56	Hutler Road (phase 4) 2,649’	Nov-03
57	Isaak Road 4,360’	Nov-03
58	Wilson Street 1,700’	Nov-03
59	pave multiple approaches	Dec-03
60	Parsons Avenue	Dec-03
61	Old Lamplight	Dec-03
62	Ainsworth Avenue	Dec-03
63	Bastien Drive	Dec-03
64	Mark Boulevard	Dec-03
65	Parsons Avenue	Dec-03
66	Romanov Drive	Dec-03
67	Green Timbers Road	Dec-03
68	W. Thomas Street	Dec-03
69	Ester Avenue	Dec-03
70	Cape Ninilchik Avenue	Dec-03
71	Thurmond Drive	Dec-03
72	John’s Road	Dec-03
73	Irish Hills Avenue	Dec-03
74	Panoramic Drive	Dec-03
75	Eastway Road	Dec-03
76	Ord Lane	Dec-03
77	Kenai Spur Extension	Dec-03
78	Community College Drive (C)	Dec-03
79	Otter Trail (C)	Dec-03
80	Midway Drive (c)	Dec-03

Count	Road Projects Identified for Construction	Discussed
81	Woods Drive	Dec-03
82	Keystone Drive (C)	Dec-03
83	Cabin Lake Road (N)	Dec-03
84	Industrial Avenue (N)	Dec-03
85	Julia Steik Avenue (S)	Dec-03
86	Fernwood Drive (S)	Dec-03
87	Deacon Street (aka Lowell Pt. Road)	Dec-03
88	Stoney Creek Road (E)	Dec-03
89	Keystone Drive	Jan-04
90	Chakok Road	Jan-04
91	Edgington Road Improvement	Jan-04
92	Echo Lake	Apr-04
93	Kobuk	Apr-04
94	Spruce Street	Apr-04
95	Jacob's Ladder Trail	Jun-04
96	Warren Avenue	Jun-04
97	Oil Well Road	Nov-04
98	Blueberry Avenue, Nikiski	Nov-04
99	Clarence Drive	Nov-04
100	Philosopher Court	Nov-04
101	Anna Leah Avenue, Khamsin	Nov-04
102	St. Foehn Court	Nov-04
103	Jo Avenue	Nov-04
104	Yesva Lane	Nov-04
105	Jabila Drive	Nov-04
106	Black Spruce Drive	Nov-04
107	Grande Heights Drive	Nov-04
108	Cosmosview Court	Nov-04
109	Calendula Street	Nov-04
110	Newberry Avenue	Nov-04
111	Khamsin	Nov-04
112	Moffit Road	Nov-04
113	Funny River	Nov-04
114	North Fork Road	Nov-04
115	Commerce Drive	Jan-05
116	Henry Creek bridge	Jan-05
117	Timber Lane	Feb-05
118	Lowell Point Road	Feb-05
119	North Fork Road	Feb-05
120	Soldotna Transfer Station	Feb-05
121	North Road Extension Project	May-05
122	Kasilof River Road	May-05
123	LaCross Way Relocation	May-05
124	Fairway Avenue	May-05

Count	Road Projects Identified for Construction	Discussed
125	Moose Range Drive	May-05
126	Marathon Road Issue	May-05
127	Tustumena Road	Jun-05
128	Old Hope Road	Jul-05
129	West Poppy Lane	Jul-05
130	Nancy Street	Jul-05
131	Iditarod Street	Jul-05
132	Whitlock Avenue	Jul-05
133	Ocean Entrance Drive	Jul-05
134	Chinulna Drive	Jul-05
135	Ryan Lane	Jul-05
136	West Poppy Lane	Jul-05
137	Kenai Keys Road	Jul-05
138	Whisperwood	Jul-05
139	Jones Road	Aug-05
140	Hutler Road	Sep-05
141	Moose Range Drive	Sep-05
142	Fairway	Sep-05
143	Moose Range Drive	Sep-05
144	Witman Court	Oct-05
145	Sutherline Road	Oct-05
146	Kylee Court	Oct-05
147	Jo Avenue	Oct-05
148	Clarence Drive (extension from Community College Drive to the end)	Oct-05
149	Anna Leah Avenue (partial)	Oct-05
150	Philosopher Court	Oct-05
151	Slaughter Ridge Court	Oct-05
152	Langille Road	Oct-05
153	Inlet Breeze Street	Oct-05
154	Betty Ann Avenue (extension)	Oct-05
155	Cessna Street	Oct-05
156	Whiskey Gulch (extension)	Oct-05
157	Secluded Circle	Oct-05
158	Cosmosview Court	Oct-05
159	Calendula Street	Oct-05
160	Foehn Court	Oct-05
161	Poppy wood (Extension)	Oct-05
162	Khamsin Street	Oct-05
163	Inlet Coast Court	Oct-05
164	Summer Set Circle	Oct-05
165	Cherilyn Avenue	Oct-05
166	Woods Drive	Oct-05
167	Hutler Road	Nov-05
168	Midway Drive	Nov-05

Count	Road Projects Identified for Construction	Discussed
169	Woods Drive	Nov-05
170	Bastein Drive	Nov-05
171	Completion of Camelot/Excalibur & Moat	Nov-05
172	Keystone Drive	Nov-05
173	North Road Extension	Nov-05
174	Paving public approaches and transfer sites access roads	Nov-05
175	Lowell Point Road/Spruce Creek Bridge	Nov-05
176	A turn lane on the Sterling Highway for the Central Peninsula Landfill	Nov-05
177	Walter Thomas School Bus turnout	Nov-05
178	Woodwill Drive	Nov-05
179	Franke Road	Nov-05
180	Campus Drive	Nov-05
181	Black Spruce Drive	Nov-05
182	Grande Heights Drive	Nov-05
183	Yesva Lane	Nov-05
184	Jabila Drive	Nov-05
185	Aeronca	Nov-05
186	Boundary Road 2,000 ft	Jan-06
187	Community College Drive 4,400’	Jan-06
188	Riverhills Avenue 2,850’	Jan-06
189	Spruce Avenue from Sterling Highway to Kobuk 1,900’	Jan-06
190	Ravenwood 1320’ From Ciechanski Liberty & Commerce to Singleton Court 1200’	Jan-06
191	Arrowhead Avenue	Feb-06
192	Hutler Road	Feb-06
193	Grouse Creek Bridge	Feb-06
194	LaCross Way	Feb-06
195	Brewer	Feb-06
196	Mallette	Feb-06
197	Auburn	Feb-06
198	Jim Dahler	Feb-06
199	Foster	Feb-06
200	Walker	Feb-06
201	Lopez	Feb-06
202	Raven Lane	Feb-06
203	Eagle Lane	Feb-06
204	Thunder Road	Feb-06
205	Galankin Street	Feb-06
206	Ron’s Avenue	Feb-06
207	Eddie’s Way	Feb-06
208	Jasper Lane	Feb-06
209	Lynn Court	Feb-06
210	Round Road	Feb-06
211	Koehler Avenue	Feb-06

Count	Road Projects Identified for Construction	Discussed
212	Charlie's Way	Feb-06
213	Karen Avenue	Feb-06
214	Palmer Street	Feb-06
215	Crossman Ridge	Feb-06
216	Juel	Feb-06
217	Kenaitze	Feb-06
218	Nielson	Feb-06
219	Kenai Spur Highway Extension	Feb-06
220	Gray Cliffs	Feb-06
221	Moose Point	Feb-06
222	Raven Lane	Mar-06
223	Eagle Lane	Mar-06
224	Goodrich Street	Mar-06
225	Kasilof River Road	Apr-06
226	Jones Stub Road	Apr-06
227	Lowell Point Road	Apr-06
228	Elly Circle	Apr-06
229	Jim Dahler	May-06
230	Yukon	May-06
231	Saber	May-06
232	Grouse Creek Bridge	May-06
233	Brewer	May-06
234	LaCross	May-06
235	Woods Drive	Jun-06
236	College Drive	Jun-06
237	Ryan Lane	Jun-06
238	Hutler Road	Jun-06
239	Jolly Avenue	Aug-06
240	Diamond Ridge Trail	Aug-06
241	Woods Drive	Aug-06
242	Mayoni Street	Sep-06
243	Woods Drive	Sep-06
244	Bishops Creek	Sep-06
245	Funny River Bridge	Sep-06
246	Marathon Road	Sep-06
247	Leif Creek Bridge	Sep-06
248	Diamond Ridge Trail	Sep-06
249	Wik Road	Sep-06
250	Voznesenka Road	Oct-06
251	East End Road	Oct-06
252	Cooper Landing By-pass	Oct-06
253	Kenai Spur Highway	Oct-06
254	Nikiski Escape Route	Oct-06
255	Community College Drive	Oct-06

Count	Road Projects Identified for Construction	Discussed
256	Midway Drive	Oct-06
257	Woods Drive	Oct-06
258	Bastein Drive	Oct-06
259	Moat Way	Oct-06
260	Camelot	Oct-06
261	Excalibur	Oct-06
262	Lost Creek Bridge	Oct-06
263	Tall Tree Avenue	Oct-06
264	Pepper Road	Oct-06
265	Slikok Creek on Sergeant Avenue	Oct-06
266	Dolly Creek off Oilwell Road	Oct-06
267	Hermosa Drive	Nov-06
268	Weaver Lane	Nov-06
269	Ian Circle	Nov-06
270	Entrada Drive	Nov-06
271	Iditarod Street	Nov-06
272	Rumley Street	Nov-06
273	Bing Drive	Nov-06
274	Kelly Lane	Nov-06
275	Hermosa Drive	Nov-06
276	Old Exit Glacier	Nov-06
277	Cindy Circle	Nov-06
278	Wilma Avenue	Nov-06
279	Forest Road Bridge	Nov-06
280	Timber Lane	Nov-06
281	Forest Road	Nov-06
282	Poppy Lane	Nov-06
283	Buoy Avenue	Nov-06
284	Thunder Road	Nov-06
285	Galankin Street	Nov-06
286	Fairway Avenue	Nov-06
287	Nancy Street	Dec-06
288	Kasilof River Road	Dec-06
289	Keystone Drive	Jan-07
290	Crane Street	Feb-07
291	North Road Extension	Feb-07
292	***Salmon-bearing streams and wetlands***	Mar-07
293	Iditarod Street Extension	Mar-07
294	Kasilof River Road	Mar-07
295	Mayoni Street	Mar-07
296	Julia Steik	Mar-07
297	Bonnie Avenue	Mar-07
298	Fairway Avenue	Mar-07
299	Airpark Development	May-07

Count	Road Projects Identified for Construction	Discussed
300	Jones Stub	May-07
301	Poppy Wood	May-07
302	Conner Road	May-07
303	Beaver Creek	May-07
304	Scout Lake	Jun-07
305	Echo Lake	Jun-07
306	Gaswell Area	Jun-07
307	Community College Drive	Jun-07
308	Skyline	Jun-07
309	Midway Drive	Jun-07
310	K-Beach Road	Jun-07
311	My Drive	Jun-07
312	Fairway Drive	Jun-07
313	Ness Road	Aug-07
314	Midway	Aug-07
315	Bastein	Aug-07
316	Woods Drive	Aug-07
317	Moat Way	Aug-07
318	Excalibur	Aug-07
319	Camelot Drive	Aug-07
320	Solid Waste Transfer Sites	Aug-07
321	Melinda Way	Aug-07
322	Mayoni Street	Aug-07
323	Moat Way	Aug-07
324	Camelot	Aug-07
325	Excalibur	Aug-07
326	Fairway Avenue	Aug-07
327	Keener Drive	Aug-07
328	Keystone Drive	Aug-07
329	Eddy Lane	Sep-07
330	Keystone Drive	Sep-07
331	Delta Avenue	Sep-07
332	Kilowatt Avenue	Sep-07
333	Gibson Boulevard	Sep-07
334	Business Park	Sep-07
335	Frontage Road	Sep-07
336	Jones Stub Road	Sep-07
337	Ness Road	Sep-07
338	My Drive	Sep-07
339	North Road	Sep-07
340	Foster	Sep-07
341	Walker	Sep-07
342	Lopez	Sep-07
343	Raven Lane	Sep-07

Count	Road Projects Identified for Construction	Discussed
344	Eagle Lane	Sep-07
345	Fairway Avenue	Sep-07
346	Kasilof River Road	Sep-07
347	Palmer Pines	Sep-07
348	Crossman Ridge	Sep-07
349	Hall Road	Oct-07
350	Sangster Road	Oct-07
351	Ellis Court	Oct-07
352	Floyd Blossom Avenue	Oct-07
353	Oilwell Road	Oct-07
354	My Drive	Oct-07
355	Stubblefield Drive	Oct-07
356	Poppy Wood Street	Oct-07
357	Whisperwood	Oct-07
358	Murwood Avenue	Oct-07
359	Leann Avenue	Oct-07
360	Lost Creek Bridge	Oct-07
361	Otter Trail	Oct-07
362	Flash Circle	Oct-07
363	Kenaitze Avenue	Oct-07
364	Nielson	Oct-07
365	Juel	Oct-07
366	Mann Road	Oct-07
367	Vio Road	Oct-07
368	Keystone Drive	Oct-07
369	Kustatan Street	Oct-07
370	Lois Way	Oct-07
371	Sangster Lane	Oct-07
372	Campus Drive	Oct-07
373	Black Spruce Drive	Oct-07
374	Woodwill Drive	Oct-07
375	Hall Road	Oct-07
376	Ellis Court	Oct-07
377	Scout Lake Loop Road	Oct-07
378	Grande Heights Drive	Nov-07
379	Yesva Lane	Nov-07
380	Jabila Drive	Nov-07
381	Fairway Avenue project	Nov-07
382	Original Drive	Nov-07
383	Silverberry Avenue	Nov-07
384	Interlake Drive	Nov-07
385	Shelikoff Street	Nov-07
386	Old Post Circle	Nov-07
387	Bear Paw Circle	Dec-07

Count	Road Projects Identified for Construction	Discussed
388	Excalibur	Dec-07
389	Camelot Drive	Dec-07
390	Turn Lane on the Sterling Highway	Dec-07
391	Hold Lamplight Road	Dec-07
392	Midway Drive	Dec-07
393	Scout Lake Road	Dec-07
394	Central Peninsula Landfill	Dec-07
395	North Road Extension	Dec-07
396	Cherokee Lane	Jan-08
397	Duke Street	Jan-08
398	Hilltop Road	Jan-08
399	Beach Drive	Jan-08
400	Kenai Spur Highway	Jan-08
401	Island Lake Road	Jan-08
402	North Fork Road	Jan-08
403	Sterling Highway	Jan-08
404	Crest Hill Road	Jan-08
405	Funny River Bridge	Jan-08
406	Dunes Road	Jan-08
407	Funny River Bridge	Feb-08
408	Poppy Ridge Road	Feb-08
409	Poppy Wood	Feb-08
410	Slikok Creek	Mar-08
411	Sterling Highway	Mar-08
412	Cottonwood Road	Mar-08
413	Greenfield Road	Mar-08
414	Dori Lynn Street	Apr-08
415	Strawberry Road	Apr-08
416	Satori Way	Apr-08
417	Yellow Brick Road	Apr-08
418	Old Kasilof Road	Apr-08
419	Glacier Avenue	Apr-08
420	Scout Street	Apr-08
421	Fem Forest Street	Apr-08
422	Julia Steik Avenue	Apr-08
423	Even Lane	May-08
424	Grant Avenue	May-08
425	Woken Court	May-08
426	Hancock Drive	May-08
427	Valley View Road	May-08
428	Keystone Drive	May-08
429	Sports Lake	May-08
430	Strawberry Road	May-08
431	Cetacea Lane	May-08

Count	Road Projects Identified for Construction	Discussed
432	Cannery Road	May-08
433	Community College Drive	May-08
434	Delta Avenue	May-08
435	Gibson Boulevard	May-08
436	Frances Helen Road	May-08
437	Bastien Drive	May-08
438	Grant Avenue	Jun-08
439	Erickson Street	Jun-08
440	Julia Steik Avenue	Jun-08
441	Halibut Way	Jun-08
442	Valley View Road	Jun-08
443	Woods Drive	Jun-08
444	Community College Drive	Jun-08
445	Voznesenka Road	Jun-08
446	Spur Highway	Jun-08
447	Iditarod Street	Jun-08
448	Poppy Lane	Jun-08
449	Woken Court	Jul-08
450	Valley View Road	Jul-08
451	Lourdes Avenue	Jul-08
452	East End Road	Jul-08
453	Greenfield Drive	Jul-08
454	Westwood Lane	Jul-08
455	Ridgecrest Circle	Jul-08
456	Bastien Drive Road	Jul-08
457	Community College Drive	Jul-08
458	Midway Drive	Jul-08
459	Iditarod Street	Jul-08
460	Woods Drive	Jul-08
461	Moat Way	Jul-08
462	Excalibur	Jul-08
463	Camelot	Jul-08
464	Kobuk	Jul-08
465	Cabin lake Drive	Jul-08
466	Stoney Creek	Jul-08
467	Bruno Road	Jul-08
468	Poppy Wood Street	Jul-08
469	Daisy Avenue	Jul-08
470	Silverweed	Jul-08
471	Ester Avenue	Jul-08
472	Granross Street	Jul-08
473	Valleyside Avenue	Jul-08
474	Green Timbers Road	Jul-08
475	Sarah Avenue	Jul-08

Count	Road Projects Identified for Construction	Discussed
476	Walter Thomas Road	Jul-08
477	Augusta Lane	Jul-08
478	Portlock Drive	Jul-08
479	Waterman Road	Jul-08
480	Fernwood Drive	Jul-08
481	Falls Creek Road	Jul-08
482	Sunshine Drive	Jul-08
483	Berussa Road	Jul-08
484	Tim Avenue	Jul-08
485	Julia Steik Avenue	Jul-08
486	Inlet Cove Lane	Jul-08
487	Greenfield Drive	Jul-08
488	Tall Tree Avenue	Jul-08
489	Kensington Avenue	Jul-08
490	Spats Avenue	Jul-08
491	Timber Lane	Jul-08
492	East End Road	Jul-08
493	Interlake Drive	Jul-08
494	Cabin Lake	Jul-08
495	Caribou Lake Trail Road	Jul-08
496	Angler's Roost	Jul-08
497	King Salmon	Jul-08
498	Treeline	Jul-08
499	Kenai Spur Road	Jul-08
500	National Avenue	Aug-08
501	Raspberry Street	Aug-08
502	Katamar Avenue	Aug-08
503	Deville Road	Aug-08
504	East End Road	Aug-08
505	Woods Drive	Aug-08
506	Valley View Road	Aug-08
507	Moose Ridge	Aug-08
508	Beach Drive	Aug-08
509	Interlake Drive	Aug-08
510	Shelikoff Street	Aug-08
511	Julia Steik	Aug-08
512	Oil Well Road	Aug-08
513	Juel Avenue	Aug-08
514	Neilson Street	Aug-08
515	Kenaitze Avenue	Aug-08
516	Sary Su Street	Aug-08
517	Bonnie Avenue	Aug-08
518	Shawna Lane	Aug-08
519	Hancock Drive	Sep-08

Count	Road Projects Identified for Construction	Discussed
520	Grant Avenue	Sep-08
521	Keystone Drive	Sep-08
522	Valley View Road	Sep-08
523	Iditarod road	Sep-08
524	Moose Ridge Avenue	Sep-08
525	Kyee Street	Sep-08
526	Arnow Street	Sep-08
527	Beach Drive - $92,000	Sep-08
528	Interlake Drive	Sep-08
529	Shelikoff Street	Sep-08
530	Sary Su Street	Sep-08
531	Julia Steik	Sep-08
532	Juel, Neilson, Kenaitze	Sep-08
533	Betty Lou Drive	Sep-08
534	Bonnie Avenue	Sep-08
535	Woods Drive	Sep-08
536	Cabin Avenue	Sep-08
537	East End Road	Sep-08
538	Canoe Avenue	Sep-08
539	Bing Drive	Sep-08
540	Rumley Street	Sep-08
541	Dunes Road	Sep-08
542	Rippa Court	Sep-08
543	Skylark Avenue	Sep-08
544	Endless View Loop	Sep-08
545	Opengate Court	Sep-08
546	Janny's Avenue	Sep-08
547	Crestline Lane	Sep-08
548	Turnbuckle Terrace Road	Sep-08
549	East End Road	Oct-08
550	Royal Street	Oct-08
551	Salty Way	Oct-08
552	Seven Sails	Oct-08
553	Jones Road	Oct-08
554	Moose Ridge Avenue	Oct-08
555	Midway Drive	Oct-08
556	Bastien Drive	Oct-08
557	Community College Drive	Oct-08
558	Jones Stub Road	Oct-08
559	Stoney Creek Road	Nov-08
560	Bruno Road	Nov-08
561	East End road	Nov-08
562	Voznesenka Road	Nov-08
563	East End Road	Mar-09

Count	Road Projects Identified for Construction	Discussed
564	East Poppy Lane	Mar-09
565	Even Lane	Apr-09
566	Otter Trail	Apr-09
567	Falls Creek Bridge	Apr-09
568	Kasilof Bridge	Apr-09
569	Deep Creek Bridge	Apr-09
570	Ninilchik Bridge	Apr-09
571	Elva Street	May-09
572	Bald Mountain Road	May-09
573	Renetta Avenue	May-09
574	Shrek Street	May-09
575	Poppy Ridge Road	Jun-09
576	Franke Road	Jun-09
577	Royal Place	Jun-09
578	Victor Drive	Jun-09
579	Wilderness Park	Jun-09
580	Elva Street	Jun-09
581	East End Road	Jun-09
582	Phillips Street	Jun-09
583	Archie Drive	Jun-09
584	Stoney Creek Road	Jun-09
585	Bruno Road	Jun-09
586	Phillips Street	Jun-09
587	East End Road	Aug-09
588	Sary Su Street	Aug-09
589	Leger Avenue	Aug-09
590	Hematite Avenue	Aug-09
591	Kantishna Avenue	Aug-09
592	Keystone Drive	Aug-09
593	Poppy Ridge	Aug-09
594	Ashton Park	Aug-09
595	Royal Place	Aug-09
596	Ole Timer Way Road	Aug-09
597	Winridge Avenue	Aug-09
598	East End Road	Sep-09
599	Rapids Avenue	Sep-09
600	Interlake Drive	Sep-09
601	Sterling Highway	Oct-09
602	Birchwood Drive	Oct-09
603	Commerce Street	Oct-09
604	West Point Avenue	Oct-09
605	Poppy Ridge	Oct-09
606	Shawna Drive Street	Oct-09
607	Whisker's Road	Oct-09

Count	Road Projects Identified for Construction	Discussed
608	Matheson Road	Oct-09
609	Discover Road	Oct-09
610	Commerce Street	Oct-09
611	Liberty Lane	Oct-09
612	McKenzie Street	Oct-09
613	East End Road	Oct-09
614	Tauriainen Trail	Oct-09
615	Winridge Avenue	Oct-09
616	J Street	Nov-09
617	Dema Hona Avenue	Nov-09
618	Etah Maku	Nov-09
619	Sterling Highway	Nov-09
620	Bonita Avenue	Nov-09
621	Knackstedt Street	Nov-09
622	Sather Court	Nov-09
623	Rose Circle	Nov-09
624	Radcliff Avenue	Nov-09
625	Fern Forest Street	Nov-09
626	Rapids Avenue	Jan-10
627	Poppy Ridge	Jan-10
628	Fern Forest Street	Jan-10
629	Bonita Avenue	Jan-10
630	Knackstedt Street	Jan-10
631	Sather Court	Jan-10
632	Rose Circle	Jan-10
633	Radcliff Avenue	Jan-10
634	Holt Lamplight	Feb-10
635	Johnson Avenue	Mar-10
636	Godwin Road	Mar-10
637	Nell Road	Mar-10
638	Vincent Avenue	Mar-10
639	Suthard Boulevard	Mar-10
640	Warren Avenue	Mar-10
641	Hematite Avenue	Apr-10
642	White Spruce Avenue	Apr-10
643	Kenai Keys Road	Apr-10
644	Beach Drive	Apr-10
645	Kennedy Avenue	Jun-10
646	Benna Avenue	Jun-10
647	Holly Lane	Jun-10
648	Daniels Lake	Jun-10
649	Dietz Lane	Jun-10
650	Poppy Ridge	Jun-10
651	Voznesenka Road	Jun-10

Count	Road Projects Identified for Construction	Discussed
652	Glacier View Road	Jul-10
653	Lost Creek Bridge	Jul-10
654	Fisherman's Street	Jul-10
655	Daniels Lake	Jul-10
656	Halbouty Road	Jul-10
657	Vanessa Circle	Jul-10
658	Basargin Road	Jul-10
659	Sea Biscuit Court	Aug-10
660	Arvind Way	Aug-10
661	Fairweather Loop	Aug-10
662	Fairweather Circle	Aug-10
663	Sharky Avenue	Aug-10
664	Sharky Court	Aug-10
665	Wolf Trail	Aug-10
666	Johnson Avenue	Aug-10
667	Poppy Ridge	Sep-10
668	Funny River Grove	Sep-10
669	Diana Avenue	Sep-10
670	Log Avenue	Nov-10
671	Kasilof River Road	Jan-11
672	Butler Creek Court	Jan-11
673	Sterling Highway	Jan-11
674	Rapids Avenue	Jan-11
675	Bing's Landing Road	Jan-11
676	Samsel Road	Jan-11
677	Kobuk	Feb-11
678	View Lane	Feb-11
679	Mary Avenue	Feb-11
680	Central Avenue	Feb-11
681	Spruce Avenue	Feb-11
682	Iron's Avenue	Feb-11
683	River Hills Drive	Feb-11
684	Swan Drive	Feb-11
685	Rapids Avenue	Feb-11
686	Dema Hona Avenue	Mar-11
687	J&J Street	Mar-11
688	Gruber Road	Mar-11
689	Rapid's Avenue	Mar-11
690	Samsel Road	Mar-11
691	Steelhead Circle	Mar-11
692	Turku Avenue	Apr-11
693	Sergief Avenue	Apr-11
694	Walter Thomas Road	Apr-11
695	Green Timbers Road	Apr-11

Count	Road Projects Identified for Construction	Discussed
696	Bastien Drive	Apr-11
697	Running Water Bridge	May-11
698	Poppy Ridge	May-11
699	Ridge Street	Jun-11
700	Cabin Lake Road	Jun-11
701	Interlake Road	Jun-11
702	Miller Loop	Jun-11
703	Jolly Avenue	Jul-11
704	Ridge Street	Jul-11
705	Spruce Circle Road	Jul-11
706	Ring of Fire Avenue	Jul-11
707	Grouse Creek Bridge	Jul-11
708	Ridge Street	Aug-11
709	Outlook Avenue	Aug-11
710	Messner Street	Aug-11
711	Tier Road	Aug-11
712	Woods Drive	Aug-11
713	Tall Tree Road Bridge	Aug-11
714	East End Road	Sep-11
715	Funny River Road	Sep-11
716	Sterling Highway	Sep-11
717	Beach Drive	Sep-11
718	Jolly Avenue	Oct-11
719	Sandy Avenue	Oct-11
720	East End Road	Oct-11
721	Basargin Road	Oct-11
722	North Road Extension	Jan-12
723	Jacobsen Avenue	Jan-12
724	Strawberry Road	Jan-12
725	Jackson Avenue	Mar-12
726	Rockwell Drive	Mar-12
727	Royal Place	Apr-12
728	Beach Drive	Apr-12
729	Woods Drive	May-12
730	Loriwood Drive	May-12
731	Bing's Landing	May-12
732	Voznesenka Road	Jun-12
733	Messer Street	Jun-12
734	Scout Street	Jun-12
735	Watkins Avenue	Jun-12
736	Jacob's Ladder	Jun-12
737	Woods Drive	Jul-12
738	Lake Marie Avenue	Jul-12
739	Aspen Avenue	Aug-12

Count	Road Projects Identified for Construction	Discussed
740	Allview Avenue	Aug-12
741	Lake Marie Avenue	Aug-12
742	Voznesenka Road	Aug-12
743	Betty Lou Drive	Sep-12
744	Dutch Landing	Sep-12
745	Lake Marie Avenue	Sep-12
746	Basargin Road	Sep-12
747	Stephens Drive	Sep-12
748	Baun Drive	Sep-12
749	Mentasta Avenue	Sep-12
750	Amchitka Street	Sep-12
751	Tustumena Street	Sep-12
752	McKinley Avenue	Sep-12
753	Shemya Way	Sep-12
754	Buske Street	Sep-12
755	Poppy Wood Street	Sep-12
756	Gas Well Road	Sep-12
757	Jones Road	Sep-12
758	Poppy Wood Street	Sep-12
759	W. Poppy Lane	Sep-12
760	Echo Lake	Sep-12
761	Woods Drive	Sep-12
762	Basargin Road	Sep-12
763	Voznesenka Road	Sep-12
764	Aspen Avenue	Sep-12
765	Kenai Keys Road	Oct-12
766	Vio Road	Oct-12
767	Julia Steik Avenue	Oct-12
768	Opal Street	Oct-12
769	Tustumena Street	Oct-12
770	McKinley Avenue	Oct-12
771	Shemya Way	Oct-12
772	Mentasta Avenue	Oct-12
773	North Fork Anchor Point River Bridge	Oct-12
774	Crooked Creek Bridge	Oct-12
775	Jacobs Ladder	Oct-12
776	Stacey Lane	Oct-12
777	Woods Drive	Oct-12
778	Royal Place	Jan-13
779	Kenai Keys Road	Feb-13
780	Julia Steik Avenue	Feb-13
781	Betty Lou Drive	Feb-13
782	Scout Lake	Mar-13
783	Isbell Street	May-13

Count	Road Projects Identified for Construction	Discussed
784	Baylor Street	May-13
785	Clarence Drive	Jun-13
786	Voznesenka Loop	Jun-13
787	Whisper Lake Paving	Jun-13
788	Sockeye Avenue	Jun-13
789	Vio Road	Jun-13
790	Kenai Keys Road	Jun-13
791	Sockeye Avenue	Aug-13
792	Kishka Street	Aug-13
793	Woods Drive	Aug-13
794	Jacobs Ladder	Aug-13
795	Kachemak Lane	Aug-13
796	Tier Road	Aug-13
797	Jim Avenue	Sep-13
798	Glacier Blue Street	Sep-13
799	Tier Road	Sep-13
800	Stol Road	Oct-13
801	Weaver Lane	Oct-13
802	Ian Circle	Oct-13
803	Hermosa Drive	Oct-13
804	N. Road	Jan-14
805	Delta avenue	Jan-14
806	Parkway Avenue	Jan-14
807	Sunrise Avenue	Jan-14
808	Pero Street	Jan-14
809	Suthard Boulevard	Jan-14
810	Kenai Spur Highway	Jan-14
811	Feuding Lane	Jan-14
812	Klondike Avenue	Jan-14
813	North Fork Anchor River Bridge	Feb-14
814	Sterling Highway MP 157	Feb-14
815	Sterling Highway MP 110.5	Feb-14
816	Crooked Creek Bridge	Feb-14
817	Klondike Avenue	Feb-14
818	Voznesenka Loop	Mar-14
819	Old Lamplight Road	Mar-14
820	Forest Lane	Mar-14
821	Klondike Avenue	Apr-14
822	Voznesenka Loop	May-14
823	Wrangell Drive	May-14
824	McKinley Avenue	May-14
825	Shemya Way	May-14
826	Paradise Lane	Jun-14
827	Spruce Avenue	Jun-14

Count	Road Projects Identified for Construction	Discussed
828	N. Kobuk	Jun-14
829	Buoy Avenue	Jun-14
830	Winridge Avenue	Sep-14
831	Eagle Ridge Court	Sep-14
832	Duke Street	Sep-14
833	Autumn Gold Drive	Sep-14
834	Sterling Highway	Sep-14
835	Crooked Creek Bridge	Oct-14
836	Kenai Spur Highway	Oct-14
837	Carver Drive	Oct-14
838	Knoll Court	Oct-14
839	Frogberry Street	Oct-14
840	Eddy Lane	Oct-14
841	Poachers Cove Street	Oct-14
842	Spruce Avenue	Oct-14
843	Greenridge Street	Oct-14
844	Joplin Circle	Oct-14
845	Amiyung Court	Oct-14
846	Turnbuckle Terrace Road	Oct-14
847	Frontier Avenue	Oct-14
848	Morrison Drive	Oct-14
849	Palmer Family Lane	Oct-14
850	North Road	Oct-14
851	Northern Pike Boulevard	Nov-14
852	Royal Place	Nov-14
853	Kenai Spur Highway	Nov-14
854	Blossom Pad Road	Nov-14
855	Bernice Lake Road	Nov-14

Table B2

Identified Road Work Areas, 2015–2018

Count	Road Projects Identified for Construction or Work	Discussed
1	Community College	Jan-15
2	Jorgensen Road	Jan-15
3	Kishka Street	Jan-15
4	Benjamin Avenue	Feb-15
5	Barn Road	Feb-15
6	Tracy Avenue	Feb-15
7	Windridge Avenue	Feb-15
8	Eagle Ridge	Feb-15
9	Lori Jo Street	Apr-15
10	Scott Avenue	Apr-15
11	Wissamickon Drive	Jun-15
12	Nolan Drive	Jun-15
13	Morrison Drive	Jun-15
14	Eddy Hill Drive	Jul-15
15	Deville Road	Aug-15
16	Dutch Landing Loop	Sep-15
17	Pacer Street	Sep-15
18	Benjamin Avenue	Sep-15
19	Tracy Avenue	Sep-15
20	Barn Road	Sep-15
21	East End Road	Sep-15
22	Tier Road	Sep-15
23	Hinerman Road	Sep-15
24	Cherry Lane	Sep-15
25	Foley Drive	Sep-15
26	Divine Court	Sep-15
27	Estate Court	Sep-15
28	St. Joseph	Sep-15
29	Rustic Avenue	Sep-15
30	Walter Thomas Road	Sep-15
31	Carver Drive	Sep-15
32	Knoll Court	Sep-15
33	Frog berry Street	Sep-15
34	Wissamickon Drive	Sep-15
35	Deville Road	Sep-15
36	Campus Drive	Sep-15
37	Royal Place	Oct-15
38	Voznesenka Loop	Oct-15
39	Barn Road	Oct-15

Count	Road Projects Identified for Construction or Work	Discussed
40	Tracy Avenue	Oct-15
41	Benjamin Road	Oct-15
42	Gruber Road	Oct-15
43	Charlie Brown Drive	Oct-15
44	Rustic Avenue	Oct-15
45	Divine Court	Oct-15
46	Estate Court	Oct-15
47	St. Joseph Street	Oct-15
48	Rustic Avenue	Oct-15
49	Walter Thomas Road (Homer)	Oct-15
50	Greenfield Drive	Oct-15
51	Newbury Avenue	Oct-15
52	Starlight Street (Ninilchik)	Oct-15
53	Aspen Avenue	Oct-15
54	Shelby Kay Street	Oct-15
55	Stariski Creek	Nov-15
56	Tall Tree Bridge	Nov-15
57	Milky Way Street	Nov-15
58	Tolin Ocean View Drive	Jan-16
59	Birchrim Lane	Feb-16
60	Wildberry Court	Feb-16
61	Eddy Hill	Mar-16
62	Aspen Avenue	Mar-16
63	Poppy Lane	Apr-16
64	Divine	May-16
65	Monica	May-16
66	Birch Rim	May-16
67	Eddie Hill	May-16
68	Milky Way road	May-16
69	East Road MP21	Jun-16
70	Clarence Drive	Jun-16
71	Bufflehead Loop	Jun-16
72	Aspen Avenue	Jun-16
73	Campus Drive	Jun-16
74	Royal Place	Aug-16
75	Zephyr Fields	Aug-16
76	East Lake Avenue	Aug-16
77	Birch Rim-Wildberry Court	Aug-16
78	Speckleberry	Sep-16
79	Woods Drive	Sep-16
80	North Road Extension	Sep-16
81	Wissamickon Drive	Oct-16
82	Hermosa Drive	Oct-16

Count	Road Projects Identified for Construction or Work	Discussed
83	Weaver Lane	Oct-16
84	Ian Court	Oct-16
85	Treasure Chest Avenue	Oct-16
86	Wallers Street	Oct-16
87	Cosmic Street	Oct-16
88	Lower Voznesenka Loop Road	Oct-16
89	Crooked Circle	Oct-16
90	Hermosa Drive	Oct-16
91	Carnation Court	Oct-16
92	Tulip Circle	Oct-16
93	Saxton Court	Oct-16
94	Saxton Drive	Oct-16
95	Lyle Circle	Oct-16
96	Barn Avenue	Oct-16
97	Benjamin Avenue	Oct-16
98	Stuart Avenue	Oct-16
99	Tracy Avenue	Oct-16
100	Triple Crown Road	Oct-16
101	Upper Voznesenka Loop	Oct-16
102	Royal Place	Oct-16
103	North Spur Highway	Oct-16
104	Kenai Spur Highway	Nov-16
105	Clarence Drive Road	Nov-16
106	Murwood Avenue	Nov-16
107	Skyline Drive	Nov-16
108	Sports Lake Road	Nov-16
109	Aspen Avenue	Jan-17
110	North Road	Jan-17
111	Eddy Hill Drive	Feb-17
112	Haleys Way	Feb-17
113	Kaylee Court	Feb-17
114	Carver Drive	Feb-17
115	Knoll Drive	Feb-17
116	Frogberry Street	Feb-17
117	Nolan Drive	Feb-17
118	East End Road	Feb-17
119	Alder Avenue	Feb-17
120	Clarence Drive	Feb-17
121	K-Beach West	Feb-17
122	Jacob's Ladder	Feb-17
123	Betty Lou	Feb-17
124	Glen Road	Mar-17
125	Kipling Circle	Mar-17

Count	Road Projects Identified for Construction or Work	Discussed
126	Turnbuckle Terrace	Mar-17
127	Moose River Drive	Mar-17
128	River Ridge	Mar-17
129	Entrance Avenue	Mar-17
130	Pederson	Mar-17
131	Benedict	Mar-17
132	Buckle Road	Mar-17
133	Summer Road	Mar-17
134	Winter Road	Mar-17
135	Hill Avenue	Mar-17
136	Tom Cat Drive	Mar-17
137	Carver Drive	Mar-17
138	Knoll Court	Mar-17
139	Frogberry Street	Mar-17
140	Emerald Street	Mar-17
141	Clarence Drive	Mar-17
142	North Road	Mar-17
143	Goldeneye Avenue Road	Apr-17
144	Emerald Street	Apr-17
145	Eddy Hill	Apr-17
146	North Road	Apr-17
147	Betty Lou Drive	Jun-17
148	Goldeneye Avenue	Jun-17
149	Campus Drive	Jun-17
150	Ravenquest Street	Jun-17
151	Huske	Jun-17
152	Escape Route	Aug-17
153	Holt Lamp Light	Aug-17
154	Marathon Road	Aug-17
155	Wik Road	Aug-17
156	Secret Lane	Aug-17
157	Longmere Way	Aug-17
158	Lake Shore Drive	Aug-17
159	Murry Lane	Aug-17
160	Forrest Lane	Aug-17
161	Marhenke Street	Aug-17
162	Dolores Drive	Aug-17
163	Eddy Hill	Aug-17
164	Emerald Street	Aug-17
165	Neolan Drive	Aug-17
166	Alder Avenue	Aug-17
167	Wyoh Way	Aug-17
168	East End Road	Aug-17

Count	Road Projects Identified for Construction or Work	Discussed
169	Campus Drive	Aug-17
170	Royal Place	Sep-17
171	Red Hill Street	Sep-17
172	Whoy Way	Sep-17
173	Scholl Avenue	Sep-17
174	Turnbuckle Terrace	Sep-17
175	Merhenke Street	Sep-17
176	North Road	Sep-17
177	Royal Place	Sep-17
178	Alex Drive	Sep-17
179	Clarence Drive	Sep-17
180	Royal Place	Oct-17
181	Williams Road	Oct-17
182	Weaver Road	Oct-17
183	Tiffany Circle	Oct-17
184	Big Bear Circle	Oct-17
185	Treasure Chest	Oct-17
186	Arness Road	Oct-17
187	Lake Vista Drive	Oct-17
188	Providence Circle	Oct-17
189	Spruce View Street	Oct-17
190	Voznesenka Loop	Oct-17
191	North Road	Oct-17
192	Alex Drive	Oct-17
193	Betty Lou Drive	Oct-17
194	Huske Street	Oct-17
195	Kostino Street	Jan-18
196	Cottonwood Lane	Jan-18
197	Eagleaerie Avenue	Jan-18
198	Hutler Road	Jan-18
199	Walters Street	Jan-18
200	Wilderness Lane	Jan-18
201	Sarah Street	Jan-18
202	Frontier Lane	Jan-18
203	Mansfield Avenue	Jan-18
204	Glacier View Road	Jan-18
205	Greer Road	Jan-18
206	Basargin Road	Jan-18
207	Kenai Spur Extension	Jan-18
208	Kilcher Road	Apr-18
209	Morrison Drive	Apr-18
210	Betty Lou Drive	Apr-18
211	Turnbuckle Terrace Road	Apr-18

Count	Road Projects Identified for Construction or Work	Discussed
212	North Road Extension	May-18
213	Oil Well Road	May-18
214	Betty Lou Drive	May-18
215	Kilcher Road	May-18
216	Wyoh Way	May-18
217	Heights Lane	May-18
218	Myra Avenue	May-18
219	Benedict Avenue	May-18
220	Turnbuckle Terrace	May-18
221	Forest Lane	Jun-18
222	Wik Road	Jun-18
223	Secret Lane	Jun-18
224	Longmere Way	Jun-18
225	Lakeshore Drive	Jun-18
226	Murry Lane	Jun-18
227	Marhanke	Jun-18
228	Dolores Drive	Jun-18
229	Escape Route	Jun-18
230	Oil Well Road	Jun-18
231	East End Road	Jun-18
232	Daisy Avenue	Jun-18
233	Silverweed Street	Jun-18
234	Basargin Road	Jun-18
235	Moose River Drive	Jun-18
236	Turnbuckle Terrace	Jun-18
237	Tom Cat Drive	Jun-18
238	Hill Avenue	Jun-18
239	Dayspring Street	Jun-18
240	Dorothy Drive	Jun-18
241	Rustic Avenue	Aug-18
242	Hutler Road	Aug-18
243	Kostino Street	Aug-18
244	Walters Street	Aug-18
245	Wilderness Lane	Aug-18
246	Sarah Street	Aug-18
247	Frontier Lane	Aug-18
248	Mansfield	Aug-18
249	Cottonwood Lane	Aug-18
250	Eagleaerie Avenue	Aug-18
251	Greer Road	Aug-18
252	Basargin Road	Aug-18
253	Alexander Avenue	Aug-18
254	Foraker Avenue	Aug-18

Count	Road Projects Identified for Construction or Work	Discussed
255	Ferrin	Aug-18
256	Forest Road Bridge	Aug-18
257	Glacier Fork bridge	Aug-18
258	Grouse Creek bridge	Aug-18
259	Spruce Creek	Aug-18
260	Running Water	Aug-18
261	Brody Bridge	Aug-18
262	Roosevelt Circle	Aug-18
263	Hallelujah Court	Aug-18
264	Foraker	Aug-18
265	Carver Drive	Aug-18
266	Skyline Drive	Aug-18
267	Heights Lane	Aug-18
268	Hillside Drive	Aug-18
269	Myra Avenue	Aug-18
270	David Avenue	Aug-18
271	Peggy Drive	Aug-18
272	Sharon Street	Aug-18
273	Ness Road	Sep-18
274	Johnsen Drive	Sep-18
275	Gas Well Road	Sep-18
276	Big Bear Circle	Sep-18
277	Kilcher Road	Sep-18
278	Wyoh Way	Sep-18
279	Betty Lou	Sep-18
280	Oil Well Road	Sep-18
281	Hutler Road	Sep-18
282	Secret Road	Oct-18
283	Longmere Way	Oct-18
284	Lakeshore Drive	Oct-18
285	Merhanke Street	Oct-18
286	Dolores Drive	Oct-18
287	Owen Street	Oct-18
288	James Street	Oct-18
289	Heistand Avenue	Oct-18
290	Rebecca Drive	Oct-18
291	Pioneer Access Road	Oct-18
292	Arc Loop Road	Oct-18
293	Nada Way	Oct-18
294	Ness Road	Oct-18
295	Big Bear Circle	Oct-18
296	Nikola Court	Oct-18
297	Mercy Way	Oct-18

Count	Road Projects Identified for Construction or Work	Discussed
298	Chorus Drive	Oct-18
299	Porter Road	Oct-18
300	Arness Road	Oct-18
301	Lake Vista Drive	Oct-18
302	Providence Circle	Oct-18
303	Moffit Place	Oct-18
304	Spruce View Street	Oct-18
305	Voznesenka Loop	Oct-18
306	Tim Avenue	Oct-18
307	Hutler Road	Oct-18
308	Glenn Avenue	Oct-18
309	Secret Road	Nov-18
310	Longmere Way	Nov-18
311	Lakeshore Drive	Nov-18
312	Murray Lane	Nov-18
313	Merhanke Street	Nov-18
314	Dolores Drive	Nov-18
315	Cohoe Beach Road	Nov-18
316	Pollard Loop	Nov-18
317	Alta Loop	Nov-18
318	Basargin Road	Nov-18
319	Roosevelt Circle	Nov-18
320	Skyline Drive	Nov-18
321	Escape Route	Nov-18
322	Murray Lane	Nov-18
323	Fox Trail	Nov-18
324	Dudley Avenue	Nov-18
325	Sycamore Circle	Nov-18
326	Betty Lou	Nov-18
327	Huske Street	Nov-18